

CAUT

Canadian Association of University Teachers

## Bulletin

ACPU

L'Association canadienne des professeurs d'université

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## Collective agreement in force at York University

Ontario Supreme Court  
Rejects Challenge

In a written judgment released on February 1, 1977, the Ontario Supreme Court rejected an application for an order in the nature of certiorari to quash the interim certificate granted by the Ontario Labour Relations Board (OLRB) to the York University Faculty Association.

The application, which was made by employees William A. Jordan, D. McCormack Smyth, and Douglas N. Butler, Helen S. Freedhoff, Phil Scheggen and James Tait, in their personal capacity and on behalf of a group of objectors, alleged that the OLRB had declined or exceeded jurisdiction by refusing to hear evidence as to the impact of the York University statute of incorporation on the issues of the appropriateness of the bargaining unit and the status of YUFA as a trade union under the Labour Relations Act.

## No unfairness

In rejecting the application the Supreme Court ruled that "there was no unfairness in the tribunal's proceedings and there was no error of law or jurisdiction in their decisions or rulings".

The Court ruled that the OLRB has not acted improperly in denying the objectors the opportunity to introduce fresh evidence a number of months after the commencement of certification proceedings. The Court declared "it is probably self-evident that Professor Jordan was aware of the York University Act and it was in our view appropriate for the Board (OLRB) to consider whether or not submissions might, with the exercise of reasonable diligence, have been made at the time of the hearing". Their Lordships noted that "the Board observed that there was no explanation why this was not done but it concluded that motive was the explanation for why these points and this evidence was not sought to be introduced at the first hearing, a motive that was designed to achieve frustration and delay".

The Court agreed that the inference drawn by the OLRB as to the motive that they identified was a reasonable one in the circumstances. Although YUFA made no application for the award of costs, the Court ruled that the costs of YUFA should be payable by the group of objectors.

## Appeal launched

On February 7th the individual ob-

jectors and group of objectors made application for leave to appeal, to the Court of Appeal. No decision on this application had been made at time of writing. However, the effect of the Supreme Court's decision was to remove the stay on the collective agreement between YUFA and York University. Accordingly that agreement is now in full operation.

A matter still outstanding in the YUFA certification is the matter of whether professors in the Osgoode Law School are appropriate for inclusion in the faculty-wide unit. Law faculties are included in the faculty-wide units at the Universities of Laval, Montreal, Ottawa, Windsor and Saskatchewan.

## Collective Bargaining Round Up

## Victoria

The University of Victoria Faculty Association has amended its constitution in a manner that would qualify the Association as a trade union within the meaning of the B.C. Labour Code. Preparations for salary negotiations between the Association and the Administration are currently underway.

## Calgary

An impasse in salary negotiations at the University of Calgary has resulted in submission of the matter to an arbitration board comprising J. E. Flavin (Chairman), K. C. Barrass (Board of Governors' nominee) and M. McGowan, (Association nominee). Last year's salary settlement was also the product of an arbitration award, which was greeted somewhat less than enthusiastically by the Faculty Association.

## Saskatchewan

The University of Saskatchewan Faculty Association has received certification for a unit of full time academic employees including department chairmen, professional librarians, and persons holding academic appointments in clinical departments of the Faculty of Medicine. Law faculty personnel are included in the general faculty unit following a decision by the Labour Board that a separate unit of law professors was not appropriate. A twenty-six member collective bargain-

ing committee is currently drafting proposals for the Association to take to the Administration.

## Regina

No certification has come through for the main campus at the University of Regina but hearings have concluded. However, the Regina Faculty Association has received certification as bargaining agent for faculty at Campion College and at Luther College.

Negotiations are underway at Algoma, Acadia, St. Thomas, Moncton and Windsor. At Windsor, the Administration's bargaining team is taking a 19th century garment shop view of the University as regards the appropriate mode of decision making. A unilateral break-off of negotiations by the Administration when the Association negotiators were prepared to discuss further characterised the Administration bargaining team's flair for the theatrics of industrial collective bargaining. The Faculty Association intends to resist Administration attempts to dismantle the collegial processes and has passed a vote of no confidence in the members of the Administration's bargaining team. A call was made to the Minister of Labour for conciliation services.

In the negotiations at Moncton, attempts are being made to negotiate a settlement that would permit the removal of censure.

## Ottawa

What is believed to be the first arbitration of a tenure denial case under a collective agreement took place recently at the University of Ottawa. The case concerned denial of tenure to Professor Goreloff, Slavic Studies. The original denial of tenure predated the collective agreement but the case was heard under the procedures for binding third party arbitration embodied in the collective agreement at Ottawa. Prior to the collective agreement University of Ottawa faculty members had no access to arbitration. The Arbitration Board, comprising of Dr. William Weingard (Chairman), Professor J. D. Whyte (Queen's University — Association nominee) and Professor G. Paquette (Carleton University — University Administration's nominee), rejected Professor Goreloff's submission that he be awarded tenure. In view of the fact that Professor Goreloff has a 250 page book accepted for publication and several articles published it would appear that, contrary to the fears of many faculty opposed to collective bargaining, academic standards will be raised, not diminished.

## U.N.B.

A recent Faculty Association referendum on whether the Association should pursue certification was incon-

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UNIVERSITIES UNDER CAUT CENSURE

The following university administrations have been censured by the Council of the Canadian Association of University Teachers.

Simon Fraser University (May 1971)

(Under the third state of censure imposed on this university, the CAUT warns its members not to accept employment with the censured university. Page 69. CAUT Handbook) Also censured are:

Université du Québec à Montréal (November 1970)

University of Ottawa (May 1972)

Mount Allison University (November 1970)

University of Moncton (May 1976)

UNIVERSITÉS FRAPPÉES DE CENSURE PAR L'ACPU

Le Conseil de l'Association canadienne des professeurs d'université a frappé de censure les administrations des universités suivantes.

Université Simon Fraser (mai 1971)

(À la troisième étape de la censure prononcée contre cette université l'ACPU avertit ses membres de ne pas accepter d'emploi auprès d'elle. Voir la page 71 du Guide de l'ACPU).

Université du Québec à Montréal (November 1970)

Université d'Ottawa (mai 1972)

Université Mount Allison (novembre 1970)

Université de Moncton (mai 1976)

Librarians

The Canadian Association of College and University Librarians is holding a workshop on collective bargaining during the annual conference of the Canadian Library Association in Montreal in June. The CACUL workshop is scheduled for June 10 and 11. CAUT has been invited to make a presentation at the workshop and will discuss recent developments in librarians' academic status and working conditions in universities across Canada.

CAUT Central Office will be happy to receive information from faculty associations or librarians about developments in the academic status or working conditions of professional librarians for inclusions in the presentation at the CACUL workshop. Please send correspondence to I.B. McKenna.

Bibliothécaires

L'Association canadienne des bibliothécaires de collèges et universités tiendra un colloque sur les négociations collectives durant la conférence annuelle de l'Association canadienne des bibliothèques qui aura lieu à Montréal en juin. Le colloque de L'A.C.B.U. est fixé aux 10 et 11 juin. L'ACPU a été invitée à présenter un exposé au colloque et elle traitera des faits récents intervenus dans la situation universitaire et les conditions de travail des bibliothécaires dans les universités du pays.

Le bureau central de L'ACPU sera heureux de recevoir des renseignements des associations de professeurs ou des bibliothécaires au sujet des faits intervenus dans la situation ou les conditions de travail des bibliothécaires professionnels afin de les évoquer dans l'exposé présenté au colloque de l'A.C.B.C.U. Prière d'adresser la correspondance à I.B. Mc Kenna.

Inadequacy in funding

Sir,

I was opposed to the government attitude towards research funding last year in that its priorities were wrong, or so I believed. The reason given is "restraint".

To be honest, my own personal investigation suggested that no really worthwhile projects in the medical field were being cancelled or deferred for lack of funding. Of course, not every research worker will agree.

It is obviously difficult to draw a line between monies that are spent in reasonable anticipation of benefit or for personnel training and those projects which have relatively little return for the tax dollars spent.

There is also a clearly identifiable problem in the compilation and supervision of applications. For example,

very few projects submitted by the Medical Research Centre of the Montreal General Hospital are refused because of the extensive review process prior to submission.

I mention this only to indicate that it is often necessary to go further than the rejection percentage to ascertain what monies are really needed.

It is my opinion that the best way to publicize any enadequacy of funding is to illustrate with specific examples where qualified research workers have been unable to proceed or continue with work which is considered by a competent higher authority to be worthwhile.

Please be assured of my continuing active interest.

H.T. Herbert, M.P.  
Vaudreuil

More Salary Information Needed

Sir,

Ms. Speight (CAUT Bulletin, Nov. 1976), points out the deficiencies of comparing average salaries over time. I agree that these figures obscure the full extent of the decline in real salaries. However, we have no better data on a national basis, and the article was a factual report. I fear that we shall have to rely on average salaries until formal salary scales become more common. I did include data on the "aging" of average faculty members, again using the best information available. The Speight estimate of a ten per cent loss of purchasing power for scales seems realistic and maybe even conservative.

Ms. Speight has pointed out an error in the formula for Ontario associate professors. A re-examination of the computations revealed a programming error that apparently accounts for the incorrect sign, plus the erroneous inclusion of Quebec data. After redo-

ing the calculation, the result is the table below.

Ms. Speight also mentions the relatively low explanatory power of these equations. Admittedly, any equation with only two variables will explain only a portion of the variation in individuals' salaries. These equations explained between 22.7 per cent (rank below assistant) to 41.1 per cent (associate).

Overall the analysis that appeared in the September Bulletin should be taken as a preliminary effort. More sophisticated breakdowns, for example by discipline, are clearly necessary if universities are to formulate adequate salary policies in times of restraint. The revival of the Economic Benefits Committee is one indication that CAUT will be responding to these needs.

Mark Thompson  
University of British Columbia

Formulae for Calculating Average Salaries, 1975

Region	Full Prof.	Associate Prof.	Assistant Prof.	Below Assistant Prof.
Atlantic	\$24,135 + 6.62x	\$18,556 + 2.91x	\$14,796 + 3.38x	\$12,079 + 8.23x
Ontario	26,209 + 6.62x	19,750 + 2.91x	15,613 + 3.38x	13,200 + 8.23x
Western	26,200 + 6.62x	19,420 + 2.91x	15,430 + 3.38x	12,140 + 8.23x

Central Points Clarified...

Sir:

John D. Whyte's "Reasons for Denying Tenure" (November, 1976) couches the central point so carefully within anecdote and counter-argument that it may have been lost on hasty readers. Even Donald C. Savage's reply fails to resume the very pressing

question looming on the horizon. With less timidity, and admittedly abstracting from the context, let me quote in a string the passages tracing Whyte's argument:

Tenure decisions based on competitive standards... and standards of excellence... will, I believe, increase, in the long run, the academic quality of our universities.

Under the present Canadian system the initial hiring decision commits the department, barring incompetence, for a long period and cuts down significantly on the opportunity for higher level hiring.

... few, if any, Canadian universities provide intellectual domination and leadership that transmit to their graduates standards of unmitigated rigour and excellence.

The requirement of high levels of achievement before granting tenure... allows the depart-

Our apologies

The letters column of the November issue of the CAUT Bulletin included a letter sent by Professor Keith Sutherland, Faculty of Education, University of Saskatchewan, to President R.W. Begg, President of the University of Saskatchewan. An unsolicited copy of the letter was received in the CAUT Central Office and was inadvertently printed in the November issue. CAUT wishes to apologize to President Begg and the University for the embarrassment caused by the publication of this letter.



Organizers Cancel Conference As Panelists Withdraw In Protest Against Government Action

## "National Security" Considerations Bar Academic From Canada

by I. Cinman

The withdrawal of a group of panelists in protest against government action has caused cancellation of a conference on Canada's ties with the Third World.

The action follows Immigration Department's refusal to allow a West-German scholar entry to Canada to attend the seminar. In the past he has been refused a visa on two separate occasions.

Professor Andre Gunder-Frank, a lecturer at the Max Planck Institute in Frankfurt, was invited to attend a symposium organized by the Sociology Department, Queen's University. The meeting, to have been held March 4, 5, and 6, aimed to examine Canada's ties with the Third World. Professor Gunder-Frank was to have been the key-note speaker, and was to have delivered a paper dealing with the role social science plays in solving social and economic problems in the developing world. He was refused entry by the Immigration officials on the grounds that his presence in Canada would not be in the "interests of this country's security".

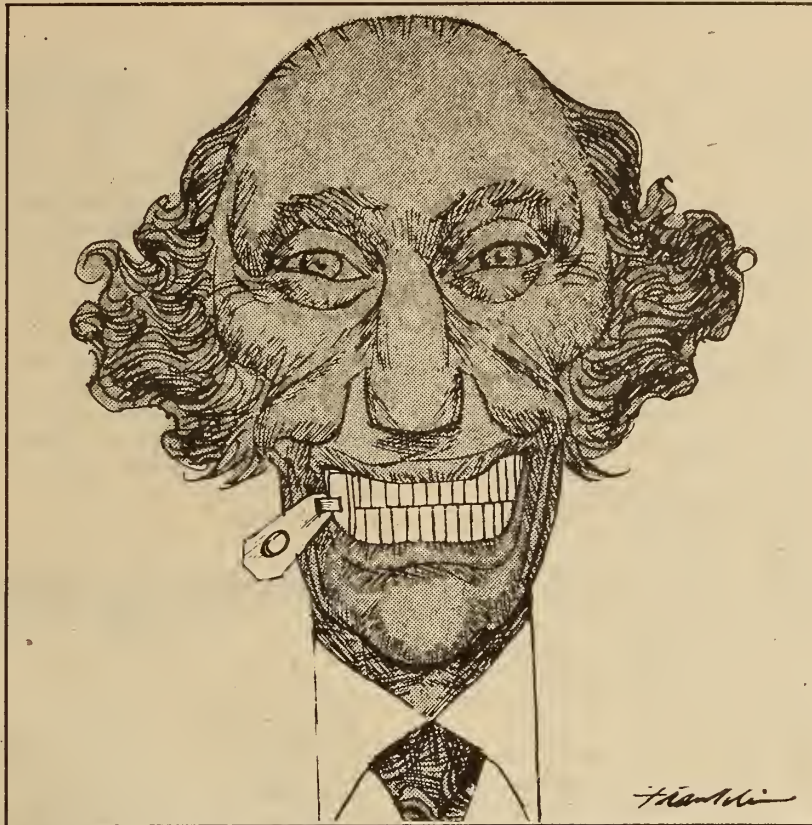
Dr. Gunder-Frank specializes in the study of the economy of developing nations, particularly those of Latin America. His best known book "Development of Underdevelopment" argues that economies of underdeveloped countries are influenced, become distorted and dependent through relations with industrially advanced countries. The book, along with many of his articles, is required reading in many university courses in Canada.

### Review decision

The Canadian Association of University Teachers has called on the Minister of Manpower and Immigration and the Prime Minister to review the Gunder-Frank case. In a statement addressed to Bud Cullen and Mr. Trudeau, the CAUT asked the government to explain how the security of Canada would be jeopardized by Dr. Gunder-Frank's temporary presence in Canada to attend a conference.

The CAUT said that denying Dr. Gunder-Frank, an acknowledged authority in the field of third-world international economics, an opportunity to participate in an academic symposium contravened the Helsinki agreement of 1972, which calls for all nations to permit free movement of scholars between countries for academic purposes.

The organizer of the conference, Dr. Kay Herman, said that in refusing Dr. Gunder-Frank entry into Canada while not providing him with adequate reasons for this decision, the government was acting in inconsistent and secretive manner. She said that Dr. Gunder-Frank was granted permission to enter Canada in the past in order to participate in the World Congress of Sociology held in Toronto in 1974. But he has been denied permission to enter Canada previous to the Congress. As a citizen of West Germany, Prof. Herman said, Dr. Gunder-Frank should not even have to apply for a visa to enter Canada, since citizens of that country who hold a



The lack of Government information to Canadians may be noting more serious than a stuck zipper.

valid passport are routinely admitted into this country.

### Protests Mount

Mounting protests by members of academic groups and individuals against Ottawa's position brought several M.P.'s into the fray. Flora MacDonald (Kingston and the Islands) spoke with the Minister of Immigration on Dr. Gunder-Frank's behalf. She was advised that his admission to Canada, for any purpose, "was prohibited".

"Mr. Frank has been informed previously that the department was not prepared to authorize his admission as an immigrant or as a non immigrant." Immigration Department officials also told her that reasons for not granting Dr. Gunder-Frank any special considerations were of a confidential nature and the department was unable to provide further details on the case.

The issue reached the floor of the House of Commons early last month when Andy Hogan (Cape Breton-East Richmond) asked the Minister to provide the House with an explanation for the Department's actions. Again Mr. Cullen, this time in the House, retreated behind the well-worn "official secrecy" phrase, maintaining that the information on Dr. Gunder-Frank in his department's possession was confidential. The details, he said, could not be revealed. Dr. Gunder-Frank's presence in Canada would not be in the country's national interest.

This position was maintained by the Prime Minister. At a press conference, Mr. Trudeau said that national security, not political views, was the center of the issue. The Prime Minister told reporters that he had personally reviewed the case and concluded that Mr. Cullen's decision was the correct one. Dr. Gunder-Frank case was a "security matter."

"There is no limit on the sort of

radical ideas that can be expressed in Canada, but there are other reasons for refusing someone entry," Mr. Trudeau said.

### No Reasons Given

He did not spell out what those reasons were. When asked what he thought the reasons for his non-admission might be, Dr. Gunder-Frank said in an interview that he had no idea what sort of information about him forced the Canadian authorities to deny him an entry visa this time or in the past.

But Dr. Gunder-Frank suspects that his presence and activities in Chile during Salvador Allende's tenure as President may have had something to do with him being barred from Canada and the United States. From 1969 to 1973 he taught university in Chile and was an advisor on economic affairs to President Allende. He was expelled from Chile after the military overthrew the Allende government.

Observers say that there is a good possibility that Canadian and U.S. authorities have been trading information about Dr. Gunder-Frank, but Canadian officials strongly deny this.

The CAUT secured an interview with Mr. Cullen who told Dr. Victor Sim, CAUT Executive Secretary, that he "would not reconsider" the case. Dr. Sim said that no satisfactory explanation was given by the minister, and that without any evidence he could not believe a recognized academic would put the country in any danger.

"Mr. Cullen said that we would agree with him if we had his information," Dr. Sim said. "Then he told the CAUT that revealing the information would harm his sources."

### Valid case?

"It seems to me that the refusal is a limitation on academic freedom of Canadians to meet and hear academics from other countries. If it

is a valid case of a security risk, we might be prepared to accept that, but we have received nothing to assure us. It's a serious case because it means that it could happen to people much less well known than Dr. Gunder-Frank."

The German-born economist spent most of his student years in the United States, where he lived from 1941 to 1959 and where he took his advanced degrees from the University of Chicago, specializing in the economy of Latin American countries.

From 1966 to 1968 he was in Canada, teaching at Sir George Williams University in Montreal. While there he requested immigrant status but was refused for reasons of security. From 1969 to 1973 he was in Chile, teaching at a university and acting as a financial advisor to President Allende. He was expelled after the military junta took power in the Autumn of 1973.

In 1974 Professor Frank was invited to teach at the Université de Quebec in Montreal. His application for an entry visa was refused. However, after considerable publicity in the press and protests from the academic community here, the government reversed its decision, but not until the academic year was well underway.

When Dr. Frank subsequently asked the government to issue him with a tourist permit to enter Canada to renegotiate the terms of his contract, the government again refused, without providing solid reasons, and Professor Frank did not take up the Université de Quebec post.

As recently as May 1976, he was invited to participate in a seminar hosted by the University of Sherbrooke, and again his application for an entry permit was turned down.

### Similar cases

The ongoing Frank case is but one in a series involving academics trying to enter Canada to teach or attend seminars. In 1973 Istvan Meszaros, a Marxist historian was denied immigrant status when offered a post by York University. He was allowed into the country only after protests from the Canadian academic community. Gabriel Kolko, a noted historian was also refused an entry visa, as were Kazimir Laski, a Polish economist, and Luigi Bianchi, a physicist. All finally entered Canada after protests.

It seems that here is a case where the possibility exists to establish some form of a review tribunal which would deal with similar cases in the future. Unlike decision-makers within the Immigration Department who sit in judgement based on secret evidence, a tribunal or a review mechanism could be struck independent of the Department. The issue is too important to leave to ministerial judgement alone. There ought to be some review procedure which balances national security against the right of an individual to know the reasons for his non-admissibility to this country. It would only be fair treatment to advise a person why he has been deemed persona non grata. We have no such mechanism at the present time. Perhaps the case of Dr. Gunder-Frank can urge policy-makers to consider an alternative to secrecy.



Academics in West Germany have to prove they are 'politically acceptable' before they can get a post.

## Protecting the State — at the expense of individual freedom

by Gunther Kloss

West German academics risk not being appointed to permanent or even temporary posts merely because they belong to a political organization deemed hostile to the Constitution, although the organization itself may not have been declared unconstitutional. In theory membership of both left and right-wing bodies is involved; in practice action is taken almost exclusively against members of left-wing groups.

The practice of scrutinizing every applicant for a teaching post in higher education—indeed, of every applicant for an appointment at every level of the public service, from teachers to nurses or engine-drivers—has been in force for several years. Despite many protests and an unresolved conflict between West Germany's major parties, the Social Democrats (SPD) and the Christian Democrats (CDU) on the criteria to be adopted, it is now firmly established.

Last summer the Minister of the Interior of the *Land* Baden-Württemberg announced that nationally in the 18 months between January 1973, and June, 1975, 422,000 cases had been examined. These investigations are now limited to the question of membership of an extremist group; often political views in general are being questioned.

Most of these "examinations" are, of course, merely routine: the appropriate Office for the Protection of the Constitution is asked whether anything negative is known about the candidate. Nevertheless, "relevant information" was obtained on 487 of the 69,550 applicants examined in this manner in Baden-Württemberg itself over the same period, and 50 applicants were eventually turned down.

Many hearings are said to be highly questionable. It has been reported, for example, that in 1973 an applicant for a teaching post was accused of having attended, a year previously, a meeting of a Marxist student association. When the applicant replied that she had never been a member of any Communist organization and belonged to a Roman Catholic group she was asked to produce a certificate from her local priest.

At other interviews applicants have been confronted by dossiers containing newspaper reports on talks given by them years ago or articles and letters published in newspapers where they had protested against, for example, the demolition of a school in order to make room for a new multi-storey car-park.

Clearly, these investigations are not concerned with an applicant's professional competence. Criticism inside Germany and increasingly also from abroad is directed against the introduction of political criteria into the selection process and the manner in which they are applied. Inevitably, too, the psychological effect of such discrimination is most damaging: an atmosphere of suspicion and even fear is fostered.

The constitutional implications are

even more serious. By instituting such detailed measures, albeit with the laudable intention of protecting the State against being undermined from within, the Federal and regional governments have created the real danger of jeopardizing the civil liberties of the individual guaranteed in the Basic Law.

The dilemma is, of course, a familiar one confronting every liberal-democratic State: a precarious balance has to be struck between the freedom of the individual and the interest of the community as a whole. Not unnaturally, West German governments are doubly anxious to take all possible precautions against a possible repetition of the traumatic events following the collapse of the Weimar Republic under the onslaught of right-wing forces.

Apologists for the measures point, too, to the special situation West Germany is in as far as communism is concerned.

Fundamental differences also exist in the status and conditions of employment of Canadian and German academics. In Canada, university teachers are appointed and employed by the university, a public corporation established by charter. In Germany, university teachers, in common with school teachers and all staff in higher education institutions, laboratory assistants as well as cleaners and secretaries, are "public employees", and most of the lecturers and professors holding permanent full-time appointments are "civil servants". Like judges, ministry officials and most of the personnel of the Federal Railways and the Federal Post Office they have a special relationship with the State, which is governed by extensive legislation.

This lists employees' rights as well as such privileges as absolute security of tenure. In practice the conditions of employment of civil servants and other public employees are now very similar. Both are infused with the long-standing Prussian tradition of loyalty and allegiance to the State (formerly the ruler) whose "sovereign function" a civil servant executes. He even has to swear a special oath of allegiance.

In West Germany, therefore, there exists a potential conflict between an academic's duty of obedience towards the existing basic democratic order under the Civil Service Law and his or her constitutionally guaranteed right to choose his profession and the freedom to teach and to research.

The only way to solve this conflict, which is now coming more and more to the surface would be to restrict the range of the German civil service to immediate ministerial employees.

Neither the Federal nor any of the *Länder* governments, however, whether led by the SPD or the CDU, are in any doubt that all prospective public employees should be screened and that radical left or right-wing views could be a reason for disqualification from a public service career. They also agree that the problem must be tackled by legal

or quasi-legal rules.

In the so-called *Radikalen-Erlass* (Extremists' Decree) of January 1972, the then Federal Chancellor Willy Brandt and the Prime Ministers of the 11 *Länder* sought to lay down some common rules how to deal with the problem.

However, the "decree" did not provide a clear-cut answer to the crucial question: does the mere membership of an extremist organization (which itself has not been banned by the Constitutional Court) automatically provide sufficient grounds for refusing employment to a person or must each case be established individually?

Different *Länder* governments have applied the decree differently, with the CDU-governed *Länder* tending to the interpretation that mere membership justified rejection and the SPD *Länder* looking at cases individually. Several administrative courts have made contradictory judgments, and a long-awaited decision by the Federal Constitutional Court in Karlsruhe about a year ago did not clarify the issue either.

The court merely forbade the collection, systematically and specifically, of material on the political reliability of a candidate, while at the same time confirming the civil service law requirement of a special loyalty towards the State.

An applicant's membership of an extremist group may be taken into account, but it should be only one factor among several, said the court.

Both the Federal (SPD / FDP coalition) government, together with the SPD-governed *Länder* on the one hand, and the CDU-dominated *Länder* on the other, claim to have been vindicated.

Cont'd on p.6

## Amnesty International



Set them free

### Loss Of Academic Freedom In Argentina

Jean E. Sonnenfeld

Since the military coup in Argentina in March 1976, there has been an intensive and systematic repression in all spheres of academic and cultural life. This repression has been manifest not only in the series of increasingly restrictive decrees, but more disturbingly in the high number of dismissals, arrests and disappearances that have taken place. The repression has affected not only those in primarily influential positions (university professors, scientists, writers, journalists, etc.), but has permeated the entire infrastructure of Argentine life to include persons ranging from administrative personnel in cultural and educational institutions to college students, often as young as 15 years old.

In March 1976, Law 21.276 was passed replacing the former law governing universities. The new law prohibits "all activities at variance with the basic objectives and purpose determined for the process of national reorganization." It also prohibits all forms of "indoctrination, propaganda, proselytism or political or trade union agitation" within the university confines. Moreover, "the government and administration of the universities will be carried out by the ministry of Culture and Education and the rectors or presidents and deans or directors designated by that minister."

Empowered by the new law, a military investigation took place in the University of the South (Bahia Blanca) in July 1976. An alleged plan of "ideological and socio-cultural infiltration" was discovered. Seventeen university professors were arrested, and the army issued a further list of 31 other "fugitives" who were also wanted, including some people who were already living abroad. The seventeen detained academics, mainly from the economics faculty, are to be tried in military courts on charges of subversive insurrection. In the present climate, there are few grounds for optimism about the outcome of the trials.

In August General Vilas, the then military commander of the Bahia Blanca region, announced the discovery of academic subversion at the university. He maintained that the most dangerous influence was exerted by those academics who had received training abroad, and then returned to poison the minds of Argentine youth with the ideas they had learnt.

The July events in Bahia Blanca are not an isolated incident. According to Subcommissioner Alais, "We have investigated the University of the South, but we still have many more areas which we have to investigate."

In August the Minister of Education, Ricardo Bruera, stated that between March and May 1976 over 2,500 academics and personnel attached to research institutes had been dismissed by the military authorities. In some cases these dismissals were accompanied by public burning of books deemed by the university authorities to be "subversive". One such book-burning "ceremony" took place at the University of Cordoba at the end of March 1976.

If you are disturbed by the loss of academic freedom in Argentina, Amnesty International is asking you to write politely worded letters on behalf of your detained and dismissed colleagues to: Excelentísimo General Jorge Rafael Videla, Presidente de la Republica Argentina, Casa Rosada, Buenos Aires, Argentina, and to: Senor Profesor Ricardo Bruera, Ministro de Educacion, Ministerio de Educacion, Cordoba 831, Buenos Aires, Argentina. Already six scientists have been released as a direct result of international pressure by physicist colleagues and other concerned bodies throughout the world.

Amnesty International news items of particular interest to academics appear regularly in the CAUT Bulletin. The space is made available to Amnesty International by the CAUT as an indication of the support the CAUT extends to AI and its aims. Support of particular cases is a matter of individual conscience on the part of CAUT members.

CAUT Bulletin ACPU: March/Mars 1977



# Western Report

Ron Lowe (CAUT Edmonton)

## Certifications

On January 26, 1977 the University of Saskatchewan Faculty Association was certified and became a trade union recognized under Saskatchewan's Trade Union Act. The bargaining unit includes instructors, lecturers, assistant professors, associate professors, professors and librarians. Attempts by the Faculty of Law to form a separate bargaining unit were unsuccessful.

Certification hearings for the University of Regina Faculty Association were completed in January. A decision is expected shortly. Meanwhile, academic staff at Campion College (the Catholic college of Regina) and Luther College have been certified as appropriate bargaining units. Both Campion and Luther are affiliated with the University of Regina Faculty Association.

Faculty at the University of Victoria are presently exploring certification and other forms of more formalized collective bargaining relationships. Several meetings have been held to debate the merits of certification, and a referendum may be held before the end of the spring term.

## Economic Benefits Seminar

Salaries, economic benefits and the Federal Government's Anti-inflation Guidelines were major topics of discussion at a recent seminar held at U.B.C. The seminar was sponsored by CAUT and the Confederation of University Faculty Associations of B.C. Participants included representatives from Faculty associations in B.C. and Alberta, as well as Dr. Ron Levesque, CAUT Research Officer, and Dr. Pat Speight, Executive Associate with the Ontario Confederation of University Faculty Associations. Subsequent meetings have been planned.

## CAUT President's Visit

In late January and early February, Dr. Jill Vickers, President of CAUT, visited faculty associations or their executives at Simon Fraser, U.B.C., Lethbridge and Calgary. The visit provided an opportunity to discuss the concerns and activities of CAUT at the national level as well as areas of local interest. Dr. Vickers hopes to visit faculty associations in Saskatchewan and Manitoba in the near future.

## Differential Tuition Fees

In spite of opposition from student groups and the three Alberta universities, Minister of Advanced Education, Bert Hohol has announced foreign student tuition fees will go up \$300.00 in 1977-78. Tuition fees for foreign students will also be raised at Alberta's community colleges and the two technical institutes.

## Saskmedia - Further Developments

Previous articles in the CAUT Bulletin have reported on the reluctance of the Saskmedia Corporation to enter into negotiations with the Saskatchewan Association of Artists and Educators (SAAE) over freelance writer and performer-educator agreements. Members of the SAAE consortium (the Association of Canadian Radio and Television Artists, the University of Regina and Saskatchewan Faculty Associations and the CAUT) have been advised to avoid contractual relationships with Saskmedia until negotiations have commenced.

In a recent media campaign, the SAAE took the initiative in challenging Saskmedia to demonstrate that its performance fulfilled the mandate of producing programming relevant to Saskatchewan. Saskmedia was also asked why the corporation's professional talent in Saskatchewan was not being used and how the corporation accounted for more than \$3.7 million of public funds. A response from the chairman of Saskmedia's Board of Directors provided little satisfaction. The SAAE will continue to pressure Saskmedia to commence negotiations.

## Professional Recruits

In light of more formal working relationships in universities and a growing burden on faculty association executives, faculty at U.B.C. and Calgary have voted to hire a full-time professional officer. This trend is also occurring in Ontario faculty associations and will unquestionably improve the operations of local associations.

# Atlantic Report

Derek W. Lawrence (CAUT Atlantic Regional Director)

## Censure at Moncton

The FNBFA met in Fredericton last December and in Moncton February 12, 1977. Professor Jim Stevens, Chairman of the AF & T Committee was invited to attend the first of these meetings, and the delegates discussed the possibilities of a joint approach to the University of Moncton administration by FNBFA, CAUT and ABPUM with a view to getting censure lifted from that institution.

It was decided that the CAUT committee will endeavour to set up more meetings with the university administrators. Professor Stevens also reported on the situation at Mont Allison which has been under CAUT censure since November, 1970. Although the final solution is unlikely to fully satisfy the aggrieved faculty member, one positive result has been the establishment of new procedures for dismissal cases.

## Bilingualism in New Brunswick

Delegates also discussed the question of bilingualism in New Brunswick. As New Brunswick is officially a bilingual province, Prof. George Semeluk, President of FNBFA said he feels that "centres of higher education in the province should accept (their) responsibility and commit themselves to a program that, within a certain period of time... will transform the province into a functionally bilingual community". The meeting accepted his proposals in principle, and delegates agreed to discuss it at meetings of their local faculty associations, while an *ad hoc* committee of FNBFA was to further refine the text so that it might be included in a brief to the MPHEC.

## Negotiations at St. Thomas

Professor Donavan reported for FAUST which has prepared a draft collective agreement as a basis for contract negotiations with the St. Thomas University administration. These negotiations are already underway and some progress has been made. The protracted hearings before the NBIRB have strengthened the union which is unified in its resolve to negotiate a good first contract. Both parties have agreed not to use legal counsel, thus reducing costs, and FAUST will not have CAUT collective bargaining officers at the bargaining table, although they will be available for consultation.

## Fiscal Transfer and the Maritimes

The NSCUFA-Relations with Governments Committee met with Premier Gerald Regan last November to discuss provincial and regional affairs as they affect higher education. The two main items for discussion were the Fiscal Arrangements Act and the MPHEC. Although generally supporting the CAUT position on the Financial Arrangements Act the Premier opposed the idea of indexing the financial support of higher education to the GNP, suggesting that this would limit the flexibility of their support, and that universities might receive less funds as a result! When asked whether the MPHEC had been requested to study this question and come up with recommendations for a joint Maritime position, the Premier was indignant, somehow thinking that the committee was suggesting that the governments of the Maritime provinces should give up their sovereignty to a non-elected body. Then he went on to say that the Commission was *too new and inexperienced in these matters to make such recommendations*.

In a letter to the Premier following the meeting Professor Lois Valley-Fischer, President of NSCUFA, expressed the committee's concern that the MPHEC was not considered an appropriate body for the development of a policy which could have been recommended to the three Maritime governments. But she also welcomed the Premier's proposal to raise at the next meeting of the Council of Maritime Premiers the question of NSCUFA representation on the MPHEC and its committees. Further meetings will now be arranged between the NSCUFA committee and the Honourable George Mitchell, Minister of Education, to discuss these and related questions. Although the Premier would not commit himself to any annual meeting, the committee accepted his assurance that he would make himself available to discuss any matters that could not be resolved through the Minister of Education.

On other fronts Acadia have begun negotiating their first collective agreement; Université Ste. Anne will be negotiating terms and conditions of employment in the near future; at Memorial the President and Vice-President are meeting regularly with a MUNFA "committee of three" to discuss the implications of the Task Force Report on University Priorities and St. Mary's will be hosting a Contract Administration Seminar for Atlantic Universities, April 1-3, 1977. Information regarding this seminar will be circulated as soon as arrangements have been finalized, but faculty associations should already be thinking of selecting their delegates, who will be able to participate, among other things, in the handling of mock grievance cases.



# Ottawa Notes

Jill Greenwell (CAUT)

## Research Institute on Women

The Canadian Research Institute for the Advancement of Women, an incorporated and registered non-profit organization founded in April 1976 following International Women's Year, has been established to foster a greater knowledge and understanding of women and to promote their full participation in Canadian society by encouraging research on women, evaluating government and non-government programmes and policies affecting women, disseminating research findings and information to the public and developing educational programmes for and about women.

It is governed by an elected board of 18 directors from across Canada and headed by Pauline Jewett (President of Simon Fraser). Membership is open to individuals and institutions (individuals \$10 a year, institutions \$100 a year). For further information write CRIAW, Suite 415, 151 Slater Street, Ottawa K1P 5H3.

## National Action Committee

The National Action Committee on the Status of Women will be holding its annual meeting at the Skyline Hotel, Ottawa, on March 18-21, 1977. Major topics will cover the employment of women, including equal pay and opportunity, income tax, CPP, Unemployment Insurance, family law, and social development programmes such as education and training, child care services, etc. For further details contact NAC, 40 St. Clair Avenue E., Suite 300, Toronto, Ont. M4T 1M9.

## Freedom of Information

The CAUT recently became a member of ACCESS — a national organization established about a year ago to promote the adoption of laws ensuring the right of access to public information at all levels of government and to ensure that those laws protect personal privacy. A recent ACCESS survey of current information policies of federal departments indicates startling variations in practices, depending upon a department's interpretation of the general Cabinet directive on confidentiality of information. The study found that one of the most frequently mentioned cases involving denial of information to parliamentarians, including M.P.'s on the government side, was in connection with potential immigrants refused entry to Canada on "security grounds". The CAUT will be meeting with Mr. Ged Baldwin, who is honorary chairman of ACCESS, and a leading proponent of freedom of information legislation in Parliament, in order to discuss CAUT's concerns in this area.

## New Citizenship Act

The new Citizenship Act, assented to July 16, was proclaimed on February 15, 1977. The long delay in proclamation has been necessary for the formulation and approval, by Governor-in-Council, of the new regulations, and for the training of Citizenship Court judges and staff. Among other amendments, the new act permits permanent residents to apply for citizenship after three years residency rather than the previous five year requirement.

## Visiting Professors and Ethnic Studies

In an effort to promote greater awareness and understanding of the ethno-cultural diversity of Canada, the Secretary of State's Office, through its Programme of Visiting Professors and Visiting Lecturers, offers financial assistance to universities interested in developing programmes and research in ethnic studies within Canada.

The inter-disciplinary nature of ethnic studies permits universities to apply for a visiting professor or lecturer in any one of a variety of disciplines, for periods ranging from a full academic year to individual lectures. Under the visiting professors plan, the Department will pay up to 80% of salary, a research allowance of up to \$2,500, and a maximum of \$3,000 for travel and removal expenses, with the university providing the balance of the salary.

Applications for visiting professors may be for one semester or an academic year. For those universities interested in inviting guest lecturers, the Department will reimburse travel expenses and provide an honorarium on the condition that the university provides lecture facilities and publicity. Those interested in detailed information should contact: The Multiculturalism Directorate, The Department of the Secretary of State, Ottawa K1A 0M5.

## Federal-Provincial Fiscal Bill Introduced

Bill C-37, dealing with the federal-provincial fiscal arrangements and federal contributions to the established programmes, including post-secondary education, was introduced by the Hon. Donald MacDonald (Minister of Finance) on February 7, 1977.

## WEST GERMAN ACADEMICS

from p.4

icated in their respective "milder" or "stricter" approaches to the problem.

It was thus inevitable that a Federal Government Bill dealing with the problem should have been rejected by the Upper House of the Federal Parliament—where the CDU has a majority—after it had passed the Lower House. It would have establish-

ed a "framework" (to which all State laws would have had to conform), and was "milder" in the sense that it made membership of an anti-constitutional party only one element in the assessment of an applicant and put the burden of proof on the authorities.

The result of these developments is that the Extremists' Decree is now officially a dead letter, and there is not even the semblance of a uniform treatment of the issue across the country. Those *Lander* ruled by the CDU are pursuing the harder line advocated in

More

# Letters

## Communication...

Prof. Victor W. Sim, Executive Secretary, C.A.U.T.

Our Union Executive has instructed me to convey to you its feelings on the C.A.U.T.'s practice of using telegrams to communicate information to locals. It is our view that such a method of communication must be rather costly and, in these times of shortages of funds within C.A.U.T. and the need for strike action support at universities such as Laval and U.Q.A.M., that it is an inappropriate use of C.A.U.T. funds. It is our experience that the ordinary mails reach various parts of the country within two or three days, and of course their cost is much lower than that of telegrams.

Accordingly, the following MOTION was CARRIED UNANIMOUSLY at our Executive meeting held on December 10, 1976, viz.:

"THAT the S.M.U.F.U. Executive is concerned by the C.A.U.T.'s use of telegrams to communicate with locals and would appreciate receiving a statement from the National Executive of C.A.U.T. on the annual cost of this service".

We request you to publish this letter in the next C.A.U.T. Bulletin, together with your response to it.

Michael Wiles,  
Union Secretary  
St-Mary's University  
Faculty Union

Professor Michael Wiles,  
Union Secretary, S.M.U.F.U.,

The CAUT Central Office attempts as a matter of course to restrict the use of telex messages to those matters which are of such urgency that a delay of even a few days in transmitting a message to local associations would be unacceptable. Our experience has been that even first-class letters can require as long as 8 days to reach their destination. In some circumstances such a delay not only means that local associations learn of important situations at different times but may not be able to respond effectively to the situation.

Since September, 1976 two lengthy telexes have been sent to all local associations at the same time. The first, sent by Dr. D.C. Savage in early November, advised local associations of the actions of the CAUT Board in supporting in principle the strik-

ing faculty members at Laval University and called upon local associations to join in that support in specific ways. It seemed essential to generate massive nation-wide support for the Laval faculty union very quickly. A telex to each local association seemed the most effective way to do so. I sent the second telex on December 8, 1976 requesting local associations to call upon federal Members of Parliament in University ridings to point out to the government that the occasion of the introduction of legislation reorganizing the research granting councils was an appropriate opportunity to urge the government to increase the federal support for university research. When the telex was sent it was expected that the Bill would be passed quickly through the legislative process and that an opportunity to exert effective pressure on the government might be lost if the message did not reach local associations without delay.

The two telexes described above were the most expensive of those sent during the past several months, each cost approximately \$450.00. The total expenditure for telex service during the first half of the 1976-77 budget year (to December 31, 1976) including monthly rental of \$102.00 and message costs was approximately \$1,700. The amount budgeted for telex service in the present budget year is \$3,500.00 By comparison the total expenditure for telex service in the 1975-76 budget year was \$5,490.00. This sum was unusually high because the extended postal strike in the late fall of 1975 resulted in much increased use of the telex machine.

On a trial basis from February 1, 1977 the telex service has been discontinued. Regular CN-CP telecommunications will be used instead. I assure you and your colleagues that the telex equipment was used with discretion in carrying out CAUT business. As requested this response is being published in the CAUT Bulletin.

Victor W. Sim  
Executive Secretary, C.A.U.T

the authorities have been accused not only of seriously limiting academic freedom but also of violating basic constitutionally-guaranteed human rights.

There has, too, been mounting uneasiness and criticism from abroad, including the decision of the French Socialist leader Francois Mitterrand to join a French Committee for the Safeguard of Civil and Professional Rights in the Federal Republic.

reprinted from the Times Higher Education Supplement



# Canadian Science Policy: At MOSST, not very much

Graham W. Mainwood

Perhaps one of the strangest dilemmas of recent years is the decline in the status of science in the midst of an ever increasing dependence of society on science and the technologies that it has developed. This perception is not just that of scientists; it is recognized by those outside the scientific community and was rather clearly pointed out in a recent article by the Duke of Edinburgh who concludes; "The pendulum must be made to swing back... at least as far as bringing the practice of science back to one of the great intellectual challenges to man. Unless it does, there will be no future for any of us". (New Scientist, Nov. 1976, vol 72 p. 434). Strong words, but they echo the feeling of many that a re-evaluation of science and its place in society is urgently needed, more particularly, a re-evaluation of the attitude of politicians towards science. While the need is not confined to Canada it is more exaggerated here than elsewhere. The climatic conditions, the distances involved in transport and communications together with the abundance of natural resources and the persistent lack of technical development of our own secondary industries, stamp Canada as a country with special problems and a special dependence upon new technology and a vigorous scientific community. In 1969 we may have hoped that Canada would in fact, take her place among the nations of the Western world in the growth of science.

The federal funding of science in the years preceding this had shown some indication that the Government was becoming aware that this area had

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*In 1969 we may have hoped that  
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science*

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been badly neglected. The Science Council of Canada had done valuable work and made many recommendations for the government support of science. The Lamontagne Committee had already aroused interest and some controversy, indeed other countries seemed to be looking to it as a model inquiry into the place of science in society and how a science policy should develop. It seemed natural then that in 1971 the Government should develop the Ministry of State for Science and Technology (MOSST) to give some real impetus to this growing awareness of the need for scientific development. At least that is what many of us thought. What has happened since then? It is time to look back on the progress of MOSST.

MOSST may be judged in two ways; by what it has said and by what it has done. What MOSST has said is contained in reports and statements by Ministers and press releases. What MOSST has done can only be judged indirectly since it seems to have little power or inclination to become involved directly with science or its financial support. Its indirect effects can perhaps be assessed by different 'barometers'. We may consider four of these: the federal support of scientific research; the relationship between scientists and government; the public attitude to federal science policy; and the development and implementation of the numerous recommendations for science and science support originally aired in Government sponsored studies before MOSST was established.

If we first look briefly at what MOSST has said the picture is rather unclear. Certainly it has from time to time appeared that MOSST has a constructive purpose and a reasonable perspective on science and its relation to Government. Mr. Drury's frequent reference to the development of science in policy as well as policies in science seemed to echo the view of the former Chief Scientific Adviser to the British Government, Sir Alan Cotrell. Should we interpret this as the development of an effective two-way bridge between science and government? If so, it seemed that MOSST could play an important role.

*Le déclin du statut des sciences n'est pas un phénomène apparent aux seuls scientifiques. D'autres, étrangers à la collectivité scientifique, en sont aussi au courant et commencent à préconiser que soit repensée d'urgence la politique des pouvoirs publics à l'endroit des sciences. L'auteur, professeur de physiologie à l'Université d'Ottawa, jette le regard sur des efforts récemment exercés pour renverser le déclin constant du statut des sciences.*

*Il examine, en particulier, les fonctions du Ministère d'Etat aux Sciences et à la Technologie et l'attitude du public à l'égard de la politique scientifique du gouvernement fédéral. Il examine aussi les modèles d'application des mesures recommandées et conclut que, même si les autorités gouvernementales établissent des projections optimistes au sujet du statut des sciences au Canada, il faut, pour assurer une réelle restauration, qu'il se mène de plus grands efforts afin d'écartier les effets étouffants de la politique gouvernementale.*

Encouragement may also have been derived from statements such as that made by Mr. Drury in Science Forum (Vol 47 (1975) p.27).

A country of Canada's wealth and scientific sophistication is expected to share in the labour of opening up new scientific frontiers. Its achievements also generate prestige, which is valuable not only to Canadian scientists but also within the wider context of the country's international relations. Failure by Canada to continue to live up to its international reputation in basic science would not only be detrimental to the international standing of its scientific community but could also diminish its influence in international negotiations of a scientific or technological nature.

Finally, basic research is an expression of the finer instincts in mankind and, like all cultural activities, merits public support because it contributes to the overall elevation of Canadian life.

On the other hand in response to questions, Mr. Drury clearly indicated that he was really not concerned about Canada's poor record of financial support from 1970-75 and of the support of scientific research relative to other developed countries. Neither did he believe it necessary to take seriously the most powerful recommendation of the Lamontagne Committee tying federal support of research to the G.N.P. This would have provided a yardstick by which we could relate research expenditure levels to those in comparable Western Countries. The picture is clearer, if more dismal, when we look at the four indicators of MOSST's impact on Canadian science. First the federal support of science since the foundation of MOSST in 1971. I can do no better than refer to the article by Harold Harvey in an earlier CAUT Bulletin (Vol 24, No. 8, p. 14.) This article presents, in graphic form, the record of government funding in recent years.

The facts are clear, there has been a steady erosion of the funding of research in Canada since 1971. Far from being the result of inflation the Government has rather used inflation as a tool to reduce financial support of research, particularly in universities. The extent to which this has been done is not paralleled in any other developed country of the Western world. The funding of Medical Research has already suffered disastrous consequences particularly in its effects on young researchers entering the field with new ideas and research proposals. For instance the M.R.C., with a mortality rate of something like 85% in project funding for this group provides little encouragement for the new generation of workers in Medical research to stay in Canada. Funding through the N.C.R. has been even worse. These facts have of course had an important effect on the second indicator, namely the relationship between scientists and Government.

The unprecedented number of scientists involved

in lobbying, in appearing before Parliamentary Committees and writing articles on government attitudes to science is testimony to the critical state of this relationship. Not infrequently one hears the suggestion by politicians that scientists have only themselves to blame, they have not previously made the arguments clear and that the present funding situation is the result of lack of this sort of activity in earlier years. Perhaps we should spend more of our time doing this. If this is really so, then what happened to the mechanisms which should provide input to the Government? Do members of the Government never read the deliberations of the Science Council of Canada or the accounts of the Senate Special Committee on science policy or even the tell tale records in Statistics Canada? If they don't know exactly what the situation is, then where is the two-way bridge that MOSST should provide? Is it always necessary to precipitate some sort of crisis with newspaper headlines before there is a government response? This seems an incredibly inefficient way to develop a science policy. One would think that if 'Science in Policy' does exist, then some finer, feedback control mechanism would have been developed. Our second indicator unquestionably shows relations between scientists and Government at an all-time low.

The third indicator, public attitude to federal science policies would, in most countries be an almost non-existent indicator. In Canada this has, over the last year, become a clear and rapidly growing response. 'Canadians for Health Research' has

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developed in an amazing way from coast to coast as a public outcry against disastrous funding policies in medical research. The National Council of Women has presented a strong case for the increased funding of all research in its brief to the Cabinet. Public, as opposed to Government support of research has made itself apparent in yet another more practical way, that is by the greatly increased contributions through voluntary agencies for the support of medical research. This very fact was used recently with the curious inverted logic that politicians often exhibit as an argument against increased federal funding responsibilities. Mr. Lalonde in speaking to CHR indicated that federal funding of medical research is now exceeded by funds from other sources. An amazing admission of the inadequacies of federal funding policy. Furthermore he suggested that CHR turn its attention to these other sources!

The fourth indicator, i.e. the implementation of recommended policies in science, would appear to be an area in which MOSST has achieved something. The introduction of bill C-26 for the reorganization of the granting agencies is certainly one of these. It deals with granting agencies within the structure developed by the Government and is probably useful to administrators. Urgent problems which face the research worker and university teacher have however not been solved and there is little indication that MOSST considers them top priority. A large part of basic research in Canada is done in universities who have the additional task of training students. While the two jobs go together hand-in-hand the funding of the two different aspects of a university teacher's work are from quite different sources. Provincial governments feel their task is largely ended when they have provided funds for teaching students. The Federal Government on the other hand funds specific research projects (to the extent of the limited funds provided by granting agencies). The overall cost of graduate student training lies somewhere in between and the cost of research overheads and provision of adequate shared

Cont'd on p.8



# Fads and Fashion in Science

Karel Rakusan

At the first glance, even the assumption that one can talk and write about fashion in science seems proposterous. What has rock hard solid science in common with "fashion" which we usually associate with the length of skirts? Fashion (according to Webster) : a prevailing custom, usage, or style a period of popularity. In this sense, any human endeavor is subject to fashion. Generally, we can analyze the rise and fall of popularity of science as such, we can talk about the changes in popularity of the individual fields of science and about changing fashion within the individual scientific fields.

Science is an integral part of human society. Therefore, changes in human society influence the status of science and of its individual branches. The position and role of science has been attacked in the last decade by several philosophers belonging to the so-called anti-science movement. During the last two decades, we witnessed the rise of interest in physical and technical sciences, undoubtedly related to the enthusiasm associated with the first space explorations, which was subsequently partly replaced by an interest in humanities during the sixties. The present economic situation is probably responsible for the recent drift towards the professional schools and more applied scientific fields.

Nevertheless, even within each scientific speciality, the interest in different topics oscillates. The pressure of society undoubtedly plays an important role in this as well. For instance, it is easier to obtain financial support for cancer research than for the basic study on cellular metabolism, to which it is closely related. Therefore, interesting research projects on various topics must be skillfully disguised under the banner of "fashionable" cancer or heart

*Bien que cela ne soit pas manifestement évident, la mode joue un rôle dans la recherche scientifique tout aussi bien qu'elle détermine la longueur des jupes, selon le Pr. Karel Rakusan, de l'Université d'Ottawa. Les pressions exercées par la société concourent beaucoup à déterminer ce qu'il y aurait lieu de financer dans la recherche scientifique et certains chercheurs agissent en conséquence, soumis qu'ils sont aux tentations de la mode.*

*Nombreux sont les dangers qu'il y a à marcher dans cette voie, selon le Pr. Rakusan. Dans l'espoir de recevoir un soutien financier, de nombreux scientifiques cèdent plus encore aux caprices du jour et se trouvent ainsi à écarter d'autres recherches peut-être plus utiles. Les organismes subventionnaires publics ou privés souvent subventionnent des travaux de recherche couramment bien prisés du public, ce qui très souvent privent certains genres d'utiles recherches de ressources dont le besoin est pressant. La "mode" en matière de recherches peut, selon le Pr. Rakusan, devenir mortelle en période de restriction.*

research. Apart from this consideration, scientists themselves are human beings and they are subject to temptations of fashion. One feels more secure to be in the mainstream of the field, irrespective of the stream's direction. The chances are, that publications on "fashionable" topics will be accepted and will attract more interest, which translates into increased number of requests for reprints, increased number of quotations and of possible invitations to symposia which are also

patterned according to fashion.

Every scientist can probably give examples of changing from his or her own field. The following illustrations are certainly not the results of a concise bibliographic study of biomedical literature. Nevertheless, a short browsing through the Index Medicus which contains most of the bibliographic data in the fields I know, revealed some interesting trends. In the 1960 edition 0.42% of all pages contained references to articles on corticosteroids. This share decreased to 0.24% in 1975, 0.15% in 1970 and 0.12% in 1975. On the other hand, references to DNA research which were not included under separate heading in 1960, increased from 0.35% in 1965 to 0.55% in 1975. The heading on prostaglandins occurs first in 1970 with 0.03% of all pages. In 1975 its share was already 0.17%, which is higher than the share of all articles on corticosteroids. The explanation for these changing trends is, of course, more complex and one can argue that this is not an illustration of changing fashion at all. A better example is probably an anecdotal announcement that the number of NIH grant applications for research on acupuncture dropped to just one this year as compared to 18 applications in the previous year and to 25 applications in 1974.

We should keep in mind that science, supported by society, must, to a certain degree, reflect its views and changing priorities. Not all the

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*Scientific community can only police itself to a limited extent. Even if we make all reasonable efforts not to be slaves of fashion, pressures are hard to resist.*

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MOSST... from p.7

facilities for the research community at each university falls into the Federal-Provincial gap. Present cutbacks have widened the gap and put even greater demands on the shrinking research grants of investigators. The problem is not a new one. It was studied in 1969 by the Science Council of Canada and after a thorough analysis by J.B. MacDonald's Committee, many useful recommendations were put forward. The implementation of these recommendations was urgently needed then. Now, eight years later, the government seems no nearer to taking action.

One can point to many specific areas where incredible procrastination by the government has led to the decline of the effective participation of Canada in Science on the world scene. The present state of research in basic physics particularly plasma and nuclear physics may have most serious consequences. The amount spent in Canada on research related to nuclear fusion is now less than 1% of that in the U.S.A. The fact that we are in the next 20 or optimistically 30 years going to face an energy crisis of devastating proportions and that nuclear fusion may be the only long term solution to the problem does not even yet seem to have penetrated the Government consciousness. Not only will Canada be unable to contribute to the work on this difficult problem but by the time solutions are arrived at elsewhere we will not have the scientific manpower to apply the solutions to the Canadian scene.

The effects of MOSST on the four indicators I have chosen is serious enough for us to question what its basic objectives really are. It seems improbable that a 5 million dollar a year bureaucracy like this could have been so ineffective as to achieve these results if its real purpose was to see that Canadian science is adequately funded and developed in a way which would be of maximum benefit to the country. One cannot help but feel that other, unwritten objectives have dominated its performance so far. Was the Government alarmed at the rising cost of research in the 1960's? Was a decision taken in 1970 that any necessary steps should be taken to curb the production of trained graduates together with the growth of science and its demands on the federal purse? The course of events since then would certainly fit in

with such a directive having been given to MOSST. The rate of scientific growth in the 1960's was often referred to by Mr. Drury in a defensive way when questioned about funding policies since 1970. Mr. Faulkner, it seems, has been an apt pupil and in a recent radio interview the same 'reflex response' was elicited. Both ministers seem to have been satisfied with and even emphasized that there was a positive growth of science before MOSST existed which has never occurred again since.

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*The government has used inflation as a tool to reduce financial support for research, particularly in the universities*

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For anyone who believes that the development of science has an important role to play in the future of Canada, the outlook is dismal. The Government must clearly be forced into a complete change in its attitude towards science if Canada is ever again going to take its place among the developed countries of the Western world. If MOSST is to play a constructive and imaginative role in the development of positive policy for science, then the deadening effects of the 'unwritten objectives' which appear to have guided its activities so far must be thrown off.

Mr. Faulkner's recent statements at the meeting of the Canadian Society for Clinical Investigation, as reported in the Globe and Mail on 26th Jan., do offer a ray of hope. He stated that "science policy in Canada is beginning to take a new sense of purpose and direction". Is this really an indication that the policy of suppressing Canadian science will be reversed? Mr. Faulkner went on to say, "improvements will be marginal at present". We certainly should not confuse the 'ray of hope' with a laser beam of the intensity needed to blast away the deadening effects of Government policy over the last seven years.

*Dr. Mainwood is on staff at the department of physiology, University of Ottawa.*

changes in research interest within the individual fields of science can be conveniently labeled as fashion. New methods and new fields in science certainly will attract the interest of researchers and enhance its progress. This is probably the case with the rise in research interest in DNA. The purpose of this short article is rather to advocate a proper balance in the scientific community. As any experienced coach knows the winning team covers the whole field. Only inexperienced players will all be where the puck is.

But the scientific community can only police itself to a limited extent. Even if we make all reasonable efforts not to be slaves of fashion, certain pressures are hard to resist. Firstly, during any period of contraction in research such as that experienced over the past seven years in Canada, the fear of being prevented from working in one's chosen career at all drives some workers to the greatest excesses of fadishness in the hope of retaining support. The scientist applies to do what he thinks he ought to want to do, not what he knows he is good at, and so a valuable line of research generated by the researcher is lost. Secondly, granting agencies, both public and private, in an attempt to stretch their meagre resources still farther, often succumb to the temptation to concentrate resources in "popular" areas, with the result that the rest of the research base dies out, and when something else becomes "popular", we have to start from no base whatsoever, so that our support policy becomes one of a perpetual chase of last year's hot subject.

Thus "fashions" in research, which are an amusing artifact when times are good, can become lethal in times of restraint. It is important not to view fashion-following as a means of cost-cutting in science.

*Dr. Rakusan is professor of Physiology at the University of Ottawa.*



# Research Funding in the Pure Sciences

Brian E. Conway

Research in the pure sciences forms a central activity from which technological development and advances in applied science spring. It is a key component in the quality of education in the Sciences that can be offered in Universities, and is the means by which the country remains competitive with other advanced nations in culture, technology and economy. Research in the pure sciences thus also can profoundly affect the quality of life which a developed society can offer.

It is therefore a tragic disaster that Canada, which once had an enviable record of enlightened policy for funding and development of the pure as well as the applied sciences up to about 1969, should now be placed very low amongst the economically well-developed nations with regard to the financial support for scientific research. It is not only a quantitative matter of the funds available but also of current attitudes of Government to the whole area of scientific activity in Canada that is a cause for alarm.

The following specific problems may be identified.

## Levels of Funding and the Consequences of their Erosion by Inflation

Levels of funding for research in Universities have remained almost frozen since 1969 while inflation has caused at least a 60% diminution of overall scientific purchasing power (rates of inflation in costs of scientific equipment and supplies have been very much higher than domestic rates - viz. 100 to 150% increases have occurred in this period). During this time, increases in Government expenditures in other areas have at least followed, if not exceeded inflation, often with very little justification. Progressive increases in sophistication of scientific instruments have taken place but in Canada cannot be taken advantage of while an almost frozen budget situation is maintained.

## Research in the pure sciences can profoundly affect the quality of life which a developed society can offer

A result of the present situation is that young scientists and research students can be trained only on old and often obsolete equipment while other competing countries especially U.S.A., W. Germany and Japan, can offer very much better facilities. The present freeze will produce a generation of young scientists in Canada who are cut off from experience with the latest scientific and technological developments.

As a consequence, our best young scientists and students, as well as some older ones, are leaving this country.

Also, new and often good students, perceiving the poor extent of scientific support which is provided, are entering other fields rather than science. This will leave a vacuum in scientific and technological know-how in the next generation which will have to be filled only by further importation of scientifically trained immigrants as occurred in the '50's.

This will affect not only the ability of this country to conduct its own research on problems of national importance (energy conversion, extraction of oil from tar-sands, natural-gas technology, environmental problems, advances in pharmaceutical and medical knowledge) but on the professional judgements that can be made on these problems.

Although the Lamontagne Commission has recommended increased applied and innovative research, in the period since 1970 the present Government has eliminated excellent programmes for applied research such as those sponsored by the Defence Research Board and diminished others e.g. by Environment Canada or Energy, Mines and Resources.

It is now difficult to obtain funding from these bodies so that many leading scientists in Universities no longer find it worth spending time making detailed and usually innovative research proposals which are often turned down. Thus, in the present system, support for the most innovative work is usually

*L'auteur, professeur de chimie à l'Université d'Ottawa, signale que le niveau du financement des sciences pures n'est pas allé de pair avec l'inflation, ce qui érode la valeur réelle des subventions. Les conséquences en sont multiples: de jeunes scientifiques et des étudiants quittent le Canada; des étudiants qui auraient autrement fait carrière dans les sciences s'orientent vers d'autres domaines et laissent ainsi, dans le savoir scientifique et technique, un vide à combler tôt ou tard par l'importation d'immigrants ayant des capacités et une formation scientifique, comme il en a été dans les années 50. La situation, selon le Pr Conway, ne peut se corriger que par le rétablissement immédiat des subventions aux sciences, aux humanités et aux arts au moins à leur niveau, en termes réels, de 1969-70. Il reste beaucoup plus à faire, cependant, pour remédier aux nombreux maux qui affligent les sciences canadiennes par suite de l'insuffisance de leur financement dans le passé.*

refused in the applied science area since only areas of research already established in Government laboratories tend to be funded in Universities.

Research planning and operation requires continuity over many years. On-off changes of policy of funding have disastrous effects on originality, full development of ideas and techniques, and innovation. They also impair cost effectiveness and productivity of established staff.

Most of the more important research groups in the pure sciences have been established with staff who have been highly trained over a number of years. The present erosion of funds by inflation without the corresponding required annual increases causes decimation of these research groups. Many years will be required to reinstate their activity and competence.

Problems of restriction of funds are not limited to grant support to Universities. A number of excellent Government laboratories are suffering a serious decline in their activities and inevitably in the quality of their work. Groups of established competence and, in a number of cases having international recognition, are becoming decimated by attrition in staff, especially in expert technical support staff. At the same time, the Government is disbursing very large sums of money through the Department of Supply and Services to consulting agencies and other companies whose competence and long-term experience in the work involved is often questionable. The Government laboratories, on the other hand, have, in most cases, a proven record of experience and specialized knowledge which is now, in many cases, being inadequately utilized.

Government restrictions on travel to scientific meetings within, as well as outside Canada, which is now a policy matter as much as a financial one, will ensure that Government and other scientists in this country will become isolated from mainstream scientific activities and developments elsewhere in the world and within Canada. If "in-house" and un-

iversity work is seriously restricted by funding, while travel to scientific meetings—the traditional *fora* for exchange of new ideas, results and techniques is substantially curtailed, there can be no other result than that a situation of "scientific isolationism" in Canada will be established as a result of this government's "Science Policy". Arbitrary interference with traditional methods of communication in the field of science, which have been established with proven efficacy over many years since the first great scientific meetings of the last century, can only compound the already serious difficulties that arise from the major cuts in support for science referred to earlier.

## The Scientific Equipment Problem

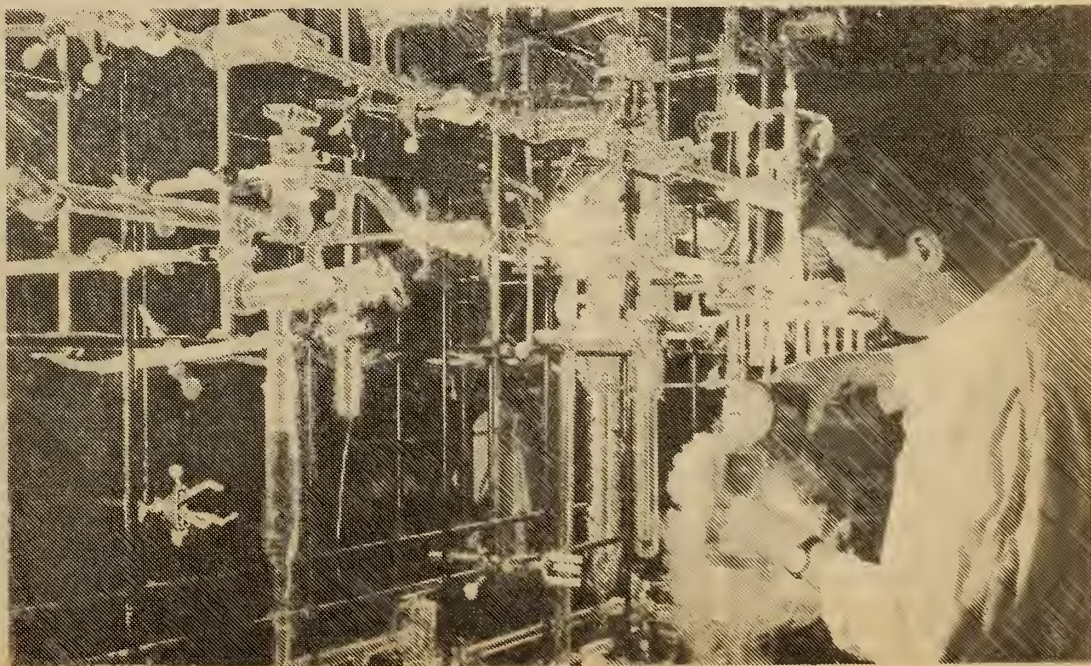
Granting councils in science, engineering and medicine, in a frozen budget situation, have (rightly) tended to maintain operating grants with an usually expanding number of well qualified applicants. Consequently funds for equipment have declined continuously until a disastrous situation has been reached. For example, in the field of Chemistry in Canada last year, only 2 pieces of major equipment and 20 pieces of minor equipment could be funded from the National Research Council in 1975 amongst about 45 Universities and several hundred applicants. The situation with equipment funding represents a major calamity no less serious than that arising from decimation of previously existing established research groups. Not only are these insufficient funds by approximately a factor of 5 for purchase of new *types* of equipment but no provision is made for replacement of existing equipment whose quality, efficiency and reliability declines at well established rates with increasing age according to known principles of depreciation. In fact, a new situation is now developing in university laboratories. Replacement parts can no longer be obtained for older instruments (10 years in age say) but funds are unavailable for purchase of new and more up-to-date replacement instruments performing similar functions.

## Government Attitudes to Science

The problems with the present Government's attitude to science are not only financial. Since the establishment of MOSST, and even earlier, it has appeared that the Government is very reluctant to seek the advice or opinions of established scientists in Canada or of Professional Societies with which they are often associated. Where such opinions and submissions have been proffered, they have often been ignored.

To the body of scientists in Canada, it seems that MOSST and the Government have been more concerned with establishing bureaucratic structures for science rather than encouraging a healthy atmosphere for productivity in science and effective development of its potential for Canada. There is a great necessity for better mechanisms for the established science community to give direct input to scientific policy—making machinery in the Government and for definition of objectives of scientific work conducted in Canada.

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NEB Photodisque Photo by Ted Brown



## LETTERS... from p.2

ments to hire more experimentally since hiring does not under normal circumstances necessarily lead to granting tenure. Not to reformulate our tenure

## ROUNDUP... from p.1

clusive but did indicate majority support of those voting. Votes in favour of certification totalled 140, against 91 with one spoiled and 82 no returns. This level of support is unlikely to encourage a move to obtain certification though the referendum was taken without any campaign by those in favour of or against certification.

The third and final pilot seminar on contract administration is scheduled for April 1-3, in Halifax where the Saint Mary's University Faculty union has kindly offered to play host. The format will be changed a little from that of previous ones partly in light of what was learned from them. It is hoped that we will have a contract administration manual ready in time to replace much of the lecture portion of the program. This will free up time for participants to experience the exhilaration of handling a mock grievance case. In view of the location, it is likely that Atlantic associations will be those most likely to send representatives but other associations whether certified or not are entirely welcome (within the constraints of available space). Collective Bargaining Committee Vacancies

The CAUT solicits nominations to its Committee on Collective Bargaining for three-year positions commencing July 1, 1977. Nominations should be sent by March 25, 1977 to Victor W. Sim, Executive Secretary, CAUT, 75 Albert Street, Ottawa, Ontario, K1P 5E7.

A nomination should have the approval and be accompanied by the curriculum vitae of the nominee.

The terms of three of the nine-person Committee expire in July 1977. The terms of reference of the Committee are found on page 27 of the CAUT Handbook (1973) and the Committee meets three or four times per academic year, usually in Ottawa.

The present Committee members are R. Penner (University of Manitoba, Chairman), B. Adell (Queen's), J. Boivin (Laval), V. Hunter (York), W. McCaughey (Ottawa), K. Moore (U.N.B.), J. Rose (U.N.B.), K. Swan (Queen's), M. Thompson (U.B.C.).

standards will keep Canadian universities from being as excellent as they might be.

I do not think that even under the most careful hiring procedure it is possible to judge anything more than that the applicant will not be lazy and unintelligent. Whether he or she will illuminate in important ways the methods and thinking of his or her discipline will not be known until there has been a chance for scholarly research, writing and pedagogic thoughtfulness.

...we need to open the debate over our aspirations for Canadian universities and Canadian university faculty and how we might meet those aspirations.

Ten years of experience at my university scream: How true! Until recently we had no well defined process at all; the granting, and very occasionally the refusing of tenure issued from persons whose chief, perhaps only, qualification was that they held a very high opinion of themselves. For the last two years there has been a defined process, and I happened to be the one member of the committee elected by the Senate last fall. Much to my dismay I discovered how the criterion of competence or "adequate performance" works itself out in practice. The weakest link in the existing chain defines the "adequacy"; and existing links notoriously rust. The committee simply inherited a tradition which had long been in force.

What can be done? First, we have to admit that the problem exists—"we" meaning especially those who have for years been putting pressure on university administrations to meet other problems. Second, we must realize

that solutions can only take Canadian form; Whyte makes this point in passing, and Savage overstates the problem ("How long will an unfettered oligarchy maintain the purity of faith?" — Yale does have an oligarchical system, but Whyte argues against any Canadian imitation of it). Third, we have to find ourselves a solution.

That last may sound trite. But I mean that we ourselves will have to be the solution, we will never find one elsewhere. Savage says: "We should focus our energies on the political process". I have no objection to the expenditure of energy in the directions he suggests. But the focus?

Perhaps the most crucial question is this: Can the CAUT shift from the defence to the offence? We have been telling administrators that they had better treat us professors with justice. It will not be long before battles of principle will all be won, and it is well known that victory itself spells death for a defence-defined organization. Can we now stand together to tell administrators they had better improve the "institutional self-esteem" of which Whyte speaks? And tell them how to do it? And make some suggestions in our handbook to facilitate the doing of it?

One hard look at many Canadian universities and their administration yields one encouraging fact: It would certainly not be difficult to inform them of higher standards and better ways. In every upgrading, of course, somebody loses out. If the CAUT is concerned only to protect its members from personal loss, then what Whyte was arguing and I am saying must be ignored.

Cyril Wlech

Department of Philosophy  
Mount Allison University

## C.A.U.T. Media Relations Officer



Sue Newman is Media and Public Relations Officer for the Canadian Association of University Teachers, the Canadian Federation of Biological Societies and the Humanities Research Council.

She began with CAUT last spring and secured publicity for the CAUT/CFBS lobbying activity initiated in March. Her work involves generating public interest and awareness through the media of the work and objectives of the CAUT, CFBS and HRS regarding government lobbying.

Educated at Mount Allison University, Sue Newman is an honours graduate of Radio and Television Arts Programme at Ryerson Polytechnical Institute.

For the last seven years she has been working both directly and indirectly with the media in the areas of Publicity, Public Relations and Broadcasting.

She started in the field of Media Relations at the University of Toronto, Pollution Probe, 1970, and was involved most recently with the University of Ottawa as Publicity Officer for the 'Festival of Life', a project which brought over 12,000 people to the University campus in celebration of Science.

For two years she produced and broadcast her own radio show on consumer affairs, and prior to her appointment at CAUT was Public Affairs and Consumer broadcaster for CBC Radio, and guest interviewer on CBOT-TV and CJOH-TV in Ottawa.

## RESEARCH... from p.9

Very effective mechanisms exist in other countries for this kind of essential activity, e.g. in the U.K. through the Royal Society, in W. Germany through the Max Planck Gesellschaft and in the U.S.A. through Congressional Committees. The question must be asked whether the present Government has itself such expert knowledge of scientific affairs that it can afford to isolate itself from mainstream input from most of the best scientists and professional societies in Canada?

### Comparisons and Priorities

The problems summarised above are not simply a matter of better funding for science, although this is one of the major difficulties, but of generation of a much improved recognition of the importance of science in a modern technological society as its tool and as an aspect of its culture. Similar considerations apply to the Arts.

It is essentially a matter of Government priorities; the major items in its present budget are for welfare and bilingualism. A second question must be asked; is Canada to become a "bilingual welfare state" at the expense of Science, Technology and the Arts? If these are allowed to decline to levels which soon will

be much inferior to those in comparably developed countries in the Western world, the whole quality of life in Canada will suffer inevitable erosion.

The unfortunate, if not inexplicable, situation exists that the policy of the Government of Canada for restriction of funding for science seems almost unique amongst the developed Western nations. Recent surveys indicate\* that in the period 1967-1975 support for scientific research in universities in various countries has increased relative to that in 1969 as follows: U.S.A. by 45%, United Kingdom by 60%, Japan (to 1973) by 80%, France 100% and W. Germany by 150%. By contrast and without any declared national policy, in Canada during this period the increase has been by only a trivial 10-15%. The much discussed "Science-Policy" often referred to during the mandate of the present Government, seems *de facto* to be one of strangulation of scientific activity. This cannot continue without Canada becoming a technological colony of the U.S., W. Germany, the

U.K. and Japan and thus being, even more than at present, economically dependent on these nations. Unfortunately the affects of this situation will become serious only in the next generation but by that time it will be too late quickly to serve the situation.

It is to be emphasized that grants for research are made only in the basis of excellence as indicated by a "peer-review" system involving internationally recognized referees. Disbursement of most other, and often much large, Government funds, e.g. in contracting, is usually done on much less critical and rigorous standards. Hence "cost effectiveness", if this term can be applied to research in the pure sciences, is at a high level in most university supported work. The fact that it cannot easily be evaluated in terms of commercial or bureaucratic procedures of "accountability" should not be allowed to obscure the great value of scientific research to the technological development of this country and to the quality of culture and higher education which can be offered in Canada.

Professor Brian E. Conway teaches chemistry at the University of Ottawa.

\* A useful source of data is the excellent article by H.H. Harvey ("Inflation: a Powerful Tool in Government Science Policy") in C.A.U.T. Bulletin, p. 14, Oct. (76).



## Post-Secondary education in B.C. from enfant terrible to brooding adolescent

John D. Dennison, Alex Tunner, Gordon Jones, Glen C. Forrester **THE IMPACT OF COMMUNITY COLLEGES: a study of the college concept in British Columbia.** B.C. Research, Vancouver, 1975. Pp. 184.

L. James Harvey, Ph.D.; **Managing Colleges and Universities by Objectives.**

In the December 1974 issue of the CAUT Bulletin, Gordon Campbell described the community colleges as the *enfant terrible* of Canadian education and predicted that if they continued "to be well cared for, it (the college system) may provide some of the most promising educational achievements in the country." Less than a year later, both the kind of care enjoyed by the community colleges in B.C. and the nature of their educational achievements are identified, documented and evaluated by the comprehensive impact study conducted by Dennison et al.

Dennison's Impact Study is itself the result of numerous studies and surveys conducted during the four year period beginning in 1971. The principal areas of "impact" studied are: the students, the educational system and the community at large. Quite often, the result of the study is more the establishment of a profile than the determination of an impact. For instance, the study of students details where they come from, what goals and aspirations they bring, and where they go after college; this is undoubtedly a profile when compared to the study of the educational system which reports on the enrolment patterns and trends in costs which are variables that reflect the impact of the college system.

Whether they be profile or impact, the results are unique because they represent the only information that is available on the performance of the community colleges in B.C. The results are valuable because they flow from a careful research design and enjoy good response rates ranging from the 60% level for surveys involving the students to a low of 14% for the survey made of the community served by Vancouver Community College. The results are important because, in a province that has never had a policy for post-secondary education, they point to a policy of education as being a social service at a time when no government can afford it as such, and some governments would rather have education be a capital enterprise.

Dennison's Impact Study documents the rapid growth of the community colleges in B.C. Whereas in 1967 the full time enrolment in the colleges was 2,500 compared to 26,700 in the universities, by 1974

the college enrolment was 12,800 compared to 30,500 in the universities. This growth of 10,300 full time students in the colleges is distinctly greater than the growth of 7,900 which occurred in all the rest of the post-secondary sector. For part time students, the community colleges' enrolment increased by 7,800 compared to a growth of 11,400 for all the rest of the post-secondary sector. Such a phenomenal rate of growth in one component of the educational enterprise must disturb what was the traditional competition for the educational dollar; indeed, it must be an uncomfortable disturbance since expenditures on post-secondary education during this period have grown at an annual rate of 10.5% (net of inflation) at the same time that the total provincial expenditure on education grew at an annual rate of 8.2% in a province whose economy was growing at an annual rate of only 6.3%.

In the face of this financial tension, Dennison discovers that the colleges are effective: career graduates do become employed and those students who transfer to the universities do as well as those students who went directly to the university. What is found to be problematical is that only a small percentage of students do actually transfer in contrast to the large percentage who indicate that transfer is their ultimate educational goal. The most disappointing discovery is no doubt the widespread lack of awareness of the community college by the community as well as the community's reluctance to recognize the worth of the college graduate as exemplified by their reluctance to pay college graduates a higher starting salary than secondary school graduates.

In summary, a reading of the Impact Study can only leave one with the realization that in ten years the *enfant terrible* of B.C. post-secondary education has grown into a brooding adolescent. Now, a little more than a year after the publication of the Study, legislation specific to the colleges is reported to be as close as the 1977 Spring sitting of the legislature. One must hope that the legislators will not act in ignorance of this study and will establish clear policy and reasonable objectives as a framework for college growth and activity during the next ten years.

The second book, L. James Harvey's *Managing Colleges and Universities by Objectives*, when read after Dennison's Impact Study provokes a mischievous "what if" question: since in the absence of governmental leadership and direction the B.C. Community colleges, as bastard children of the Public Schools Act, have had a significant educational impact, how much more of an impact

would they have had if the system had been created under its own enabling legislation as the result of the government's desire to direct and lead its electorate towards the attainment of set goals in the post-secondary sector of education? The question is perhaps whimsical but it is not farfetched if you consider that the impacts measured by a Dennison type study should be the intended outcomes which flow from the goals and objectives set for community colleges.

Dr. Harvey's book is a manual on the implementation and practice of management by objectives. He lists the pros and cons of MBO but does not argue the case for MBO; because of this, the book will appeal to and be most valuable to the administrator who is already convinced of the value of MBO. The real strength of this slim volume lies in the clear and concise manner in which Dr. Harvey sets out the mechanics of implementing MBO, the setting of objectives and the connection between MBO and evaluation of administrative competency.

In these days, everyone has an opinion on education: the general populace are more vocal than ever in their attack on the inefficiencies of the educational system; the educators are almost paranoid in the defense of their "academic freedoms". What educational administrators need to do now is to fight the populist cry for better efficiency by focussing on improving effectiveness and quality. The question of efficiency asks only if we can continue what we have been doing in the past for less cost in the future. The question of effectiveness asks us to examine not only the cost of what we are doing, but whether or not what we do is necessary, valuable and producing results which are congruent with our objectives. Dr. Harvey's point is that although MBO is a delicate concept to implement successfully in an educational institution, it can be done and the inevitable result will be improvement in the effectiveness of the institution. Further, he would have us believe that the MBO approach is the only one providing any hope for improvement in the effectiveness of complex institutions; it is the way to maximise the "impact" of our institutions.

The value of MBO to colleges and universities is not widely accepted, but it is a management concept that both colleges and universities should consider adopting. If you are a skeptic, an hour spent reading this book could well shake your skepticism. If you are an administrator, this book should be placed on your reading list whether or not you are suspicious of MBO. If you read Harvey's book, ten to one you'll find yourself exploring in the excellent bibliography provided.

Douglas K. Jardine

## Président - Vice-Président - Trésorier l'ACPU

L'Association Canadienne des Professeurs d'Université sollicite des suggestions de candidature de la part de ses membres pour combler des postes de président, vice-président et trésorier.

Le candidat doit être un membre de l'ACPU et son nom doit être suggéré par un autre membre de l'ACPU. Lui ou elle doit avoir expérience extensif dans les affaires d'Association des professeurs. Les candidatures doivent être soumises avec un curriculum vitae et un engagement écrit de la part du candidat de servir à ce poste durant un an.

La correspondance doit être adressée au Professeur David Braybrooke 75 rue Albert, Suite 1001, Ottawa, Ont. K1P 5E7.

## President, Vice-president, Treasurer CAUT

The Canadian Association of University Teachers solicits suggestions for nominations for President, Vice-President and Treasurer of the CAUT.

The nominee must be a member of the CAUT and must be nominated by another member of the Association. He or she must have extensive Faculty Association experience.

Nominations must be accompanied by a curriculum vitae and written agreement of the candidate to serve. Duration of term — one year.

Correspondence should be addressed to Professor David Braybrooke Chairman of the Nominating Committee, 75 Albert Street, Suite 1001, Ottawa, Ontario K1P 5E7.



# Teaching of economics, mathematics and philosophy — some notable improvements

Report on Teaching: 3. Change Magazine, New Rochelle, N.Y. January 1977. Pp. 72.

This Report, the third in a series supported by the U.S. federal Fund for the Improvement of Postsecondary Education, describes some notable improvements in the undergraduate teaching of economics, mathematics, and philosophy. The purpose of the program is not only to publicize individual professors' efforts in this area, but also to reinforce and support the growing concern of disciplinary associations for the quality of undergraduate education exhibited in their conferences, journals, and newsletters.

Courses in economics enjoy large student enrollments, in spite of the failures of practitioners to predict or explain recent inflation-recession trends. The problem for teachers of the subject, then, is not who to teach, but what to teach and how. Leaders in the field generally are agreed that economics should neither stress facts nor supply a set of answers to problems, but should provide a set of analytical concepts and principles applicable to future as well as present problems. What is more difficult is to design flexible, introductory courses that will aid students to become independent thinkers about economic problems. As for effective teaching methods, economists increasingly are aware of the lack of fundamental knowledge about the learning process. Accordingly, the American Economics Association has encouraged research in this area and has sponsored the new *Journal of Economic Education* for the publication of results of studies of teaching effectiveness. Recent and proposed experiments include computer-assisted instruction, programmed learning, student self-paced learning, and alternative teaching approaches for different learning conditions. Finally, the Association's Committee on Economic Education is attempting to improve payoffs and increasing incentives for good teaching by assisting major universities to build training in teaching into their PhD graduate programs in economics.

Welcome trends in the improvement of basic courses in elementary economics, some of them involving alternatives to the traditional lecture-plus-textbook approach, are now taking place. Reduction in the number of topics covered, greater emphasis on the development of analytical skills, and the opportunity to deal with practical problems characterize several of the courses described in this Report. Theory and application go hand in hand in an introductory course using an individualized system of instruction, supported by a faculty-developed casebook — now in use at nearly 200 U.S. colleges — for the development of students' rational decision-making abilities in such problem areas as government inflation-control policy and the effects of pollution abatement efforts on corporate spending and profits. Economics courses in about 80 U.S. colleges and universities now employ self-paced instruction (SPI), a variation of the Keller plan developed a decade ago and also known as the personalized system of instruction (PSI). A detailed assessment of SPI's strengths and weaknesses in an introductory economics course has revealed a significant improvement in final exam scores and in the performance of under-prepared students, and has brought to light a number of interesting discoveries about teaching in general. The computer-assisted devices described in this Report include PLATO (Programmed Logic for Automatic Teaching Operation), TIPS (Teacher Information Processing System), a low-cost method of highly individualized instruction for large classes claimed to increase student achievement on examinations and long-term retention of knowledge, and a simulation gaming approach to intermediate macroeconomic theory.

Unlike some other academic areas, mathematics does not experience the influence of any strong cultural factors that would influence its content and methods. In addition, mathematicians do not

specialize on the undergraduate level. Taken together, these two conditions should make it easier to assemble teams to experiment with new teaching techniques in mathematics than in most other disciplines. This Report carries ample evidence of success in this area. However, some readers will be discouraged to learn that while the improvement of teaching takes real effort, the life cycle of innovations may be short, the achievements secured often are neither transportable outside the discipline nor applicable to other areas within the same discipline, and the vast majority of academic colleagues remains unaffected by most innovative developments. In their search for project nominations for this Report, officers of the Mathematical Association of America, in particular, discerned a tendency among many innovative programs eventually to regress to old-fashioned prototypes. Although initially disappointing, this discovery was tempered by the belief that the traditional prototypes were changed in some ways by the continual exposure to new ideas.

Mathematics is a "critical filter" in the job market and in advanced academic study in many fields. The recognition that large numbers of students, especially women, are excluded from careers in science and quantitative fields, has prompted the development of programs — some remedial and traditional, others experimental — designed to increase the self-confidence of students suffering from mathematical insecurity through patient and sympathetic teaching of missing mathematical skills. For example, a Math Anxiety Clinic offers a combination of supportive classes, workshops, a psychology lab, and individual counselling. To assist students in achieving the level of abstract thought and intellectual discipline essential to a liberal arts education, the designers of a Math and Society course lead students from their comfortable concrete view of the world to an appreciation of the value of abstract thought by teaching mathematical concepts both historically and in the practical context of contemporary society. Mathematics is among several disciplines whose subject matter is suited to individualized courses of self-paced instruction. This Report describes two versions of this method — one an alternative to the traditional classroom setting, the other supplementary to it — aimed at reducing the stumbling blocks experienced by students of elementary calculus and geometry. Additional variations on this approach include a Media Assisted Self Study program and a multimedia Math Learning Center, both designed to teach elementary mathematics to large groups.

Philosophy departments, more than other academic areas, sustained high losses in student numbers in recent years. Their relative isolation from other departments, the esoteric research interests of many faculty members, and the graduate school mentality of instructors who treated their classes as breeding grounds for future professional philosophers, all conspired to retard responses to changing student needs. The effect: a depressed area in the academic marketplace, with an oversupply of PhDs and a low demand for their services as teachers. Encouraging signs of change are to be found in attempts to adapt both curriculum and teaching techniques to current problems of social and political concern, participation in inter-

Cont'd on p.13

## About our reviewers

*Douglas K. Jardine is acting principal of Capilano College in British Columbia... Professor D.W. Lawrence is CAUT Atlantic Regional Director... Michiel Horn teaches history at Glendon College, York University... James B. Hartman is consultant to the Royal Commission on Algoma University College.*

## Education in Nova Scotia: a quantitative assessment

ANNUAL REPORT OF THE NOVA SCOTIA DEPARTMENT OF EDUCATION, 1974-75. Queen's Printer, Halifax, N.S.

In his introduction, the author of this report points out that the steadily declining birthrate of the sixties is now being reflected in declining public school enrolment in the elementary grades, while an abnormally large proportion of the school population is located in junior high and senior high schools where programmes are more highly specialised. At the same time enrolments in prevocational and occupational programmes have been steadily increasing, and more and more adults are requesting continuing education classes for academic or occupational upgrading or for personal development. The time has come for "determining priorities in the allocation of limited funding available for education", and while schools are being faced with demands for accountability, the reader is assured that teachers, aware of this problem, "are showing an increasing tendency to report the results of their efforts in qualitative rather than quantitative terms".

After these promising opening remarks the report deteriorates into a mainly quantitative assessment of the Department's achievements during the 1974-75 fiscal year. It is divided into two sections approximately equal in length: a written report on the various services offered by the Department, followed by a set of statistical tables covering a range of subjects from school finance to teachers' mobility. It is difficult to choose between the two parts when it comes to literary excellence. Typical of government reports it deals with past actions, gives few indications of future objectives and leaves to the reader the task of interpreting the facts.

We are informed that an interprovincial agreement was signed early in 1975 for the establishment of a new learning centre for the visually handicapped in metropolitan Halifax-Dartmouth. (In 1977 teachers of this underprivileged group are still wondering where the centre is to be located!) Under the auspices of the Total Education Program Development System some 110 projects in programme innovation were approved for financial support, some being submitted by teachers and administrators, others by university education departments. (Unfortunately most of these have now been eliminated as a result of financial restraints). Elsewhere in the report mention is made of high school achievement tests, school construction projects, the publication of new teaching guides, and even the fifth annual School Bus Supervisor's Conference.

But most space is devoted to programmes and services for youth. The emphasis here is on individualising instruction; which explains the development of guidelines and materials for legal education in junior and senior high schools in response to a need expressed by students "to understand more about legal systems and processes, and about individual rights and responsibilities under the law". This material, along with new programmes in industrial arts, physical education, home economics, social studies and foreign languages (other than French) is piloted in selected schools throughout the province. Gradually, through these pilot projects, new areas of specialisation are being developed; for example successful experiments in Spanish, German, Russian, Latin and Greek could well mean that the Nova Scotia Department of Education will eventually offer a genuine language option to students proceeding to university.

For these conclusions, however, one has to read between the lines of the report - or between the columns of the statistical tables. It is while reading Table 7 - Adult Vocational Education that the reader becomes aware of the progress being made by females in training for professions once reserved exclusively for men, while male students seem reluctant to train for jobs traditionally held by women: of 13 students enrolled in the Barbering and Mens Hair-styling course 11 were females, while there were no male students registered for the chambermaid class.

Derek W. Lawrence



# The Books of Chronicles: higher education in Canada 1663-1960

Robin S. Harris; *A History of Higher Education in Canada 1663-1960*. Toronto and Buffalo, University of Toronto Press, 1976. \$37.50.

This is a monumental book, though not as monumental as its price may suggest. Professor Robin Harris, of the University of Toronto, has written an account of three hundred years of university teaching and related research and scholarship in Canada. Although he readily admits that this is not all there is to higher education he contends that instruction and research are the two central functions of the university.

The book's format is simple. Prof. Harris has chosen five dates which he believes to be of focal significance, 1860, 1890, 1920, 1940 and 1960, and discusses the developments in curriculum and research in each of the periods leading up to these dates. These are well-chosen; it is thus easy to get a notion of what was happening at various times in a given discipline or university. But while the technique helps to make the work very useful as a reference book, it has the disadvantage of making the account as a whole about as gripping as the Books of Chronicles.

Prof. Harris's book is essential reading for anyone interested in Canadian universities. No other study comes close to it in its wealth of information no other establishes as clearly that our universities are not merely copies of English, Scottish, U.S. or French institutions, but that their development is *sui generis*. Canadians in this as in other fields were willing to borrow heavily. However, they also adapted their institutions to local circumstances and

regional environments.

Harris confirms what many of us already knew or suspected. The pioneer era for most of the older institutions came to an end only in the 1950s; even McGill, Toronto, Queen's and Dalhousie — the Canadian Big Four well into this century — were less than prominent in many fields of scholarship and teaching before 1960. This is hardly surprising, given the scarcity of money, especially before the federal government started making grants to provinces for higher education in 1951. The reminder is ominous, however, at a time when the universities' rations are being reduced.

The book also reminds us that some controversies which we may be tempted to think of as novel are in fact quite old. Thus one reads that in the interwar years "there were widespread complaints about the inadequate preparation of matriculants in all subjects," and especially in English. Perhaps someone will this year, as a 50th anniversary gesture, revive the paper presented by E.K. Broadus to the 1927 meeting of the National Conference of Canadian Universities. Its title, "Weaknesses in English among Undergraduates and Graduates in Canadian Universities," has a remarkably current ring.

There are other passages which have current applications. For example, a statement by H.S. Somers to the NCCU in 1961 about the relationship of liberal arts colleges to graduate studies, had it been followed, would have prevented the proliferation of marginal graduate programmes in the 1960s. But, given the contrast with the financial stringency of earlier decades, the easy money of the Sixties would have led saints astray.

To say that this book is an essential source is not to

say that it is free from flaws. Prof. Harris is not to blame for the unhappy choice of typeface, the occasionally inadequate inside margins and the preposterous price. Errors, however, are his responsibility. He writes that Upper Canada had a House of Assembly in 1860; at that time the united province of Canada had an Assembly to which the voters of Canada West elected 65 members. More striking is Prof. Harris's misleading assertion that Newfoundland was a colony in 1925. It was, in fact, a self-governing entity much like Canada until 1934 when the failure to meet debt obligations led to a surrender of responsible government.

It is impossible for me to assess how accurate the treatment of the various colleges and universities and their programmes is. I did spot two errors in his discussion of my own alma mater, however. Victoria College, U.B.C., neither was nor had a normal school in 1940, and it did not offer a full programme in commerce in 1960.

In his discussion of scholarship and research in the 1940s Prof. Harris overlooks the work of the Social Science Research Bureau at McGill. It was financed by the Rockefeller Foundation and produced ten volumes of pioneer research. The *Frontiers of Settlement* series, edited by Carl Dawson, also fails to get mention. Yet these projects by themselves go far to contradict Harris's remarks about the general lack of accomplishment during the Depression years.

Prof. Harris seems more concerned with the 'what' than with the 'why' of his subject. As a result his study will prove far more valuable as a reference work than as a guide to social scientists seeking an analysis of growth and change. However, everyone will treasure the superb bibliography. Given the price, few of the *Bulletin's* readers will rush out to buy this book. Make sure your library gets it, however, and try to become acquainted with it before long.

Michiel Horn

## Recently Released Titles

Compiled by I. Cinman

Kenneth E. Eble, *The Craft of Teaching; A Guide to Mastering the Professor's Art*. Jossey-Bass Publishers, San Francisco, 1976. Pp. 175. \$10.95.

This book provides a short overview of teaching. Parts touch on assumptions teachers make as well as attitudes and skills they ought to develop. Other sections deal with teaching inside and outside the classroom and modes of instructions; practical problems and better ways in preparing teachers in graduate schools. The author, Professor of English at the University of Utah and former director of the Project to Improve Teaching sponsored by the American Association of University Professors and the Association of American Colleges, stresses the importance of attitudes and commitments new teachers bring to their work.

H. Zeiler, ed., *New Forms of Higher Education in Europe*, European Centre for Higher Education, UNESCO, Bucharest, 1976. Pp. 185.

A record of a symposium aimed at exchanging views and experiences and to identify the most significant factors of interest to educators and administrators in charge of higher education in Europe. Subjects discussed include examination of innovative educational methods and structures in Sweden, Yugoslavia, Federal Republic of Germany, Spain, Great Britain, the USSR, Poland, Italy and other countries. Generally descriptive in approach, but with novel insights into educational structures of East European nations.

John W. Holland and Michael L. Skolnik, *Public Policy and Man-power Development*. Department of Educational Planning, The Ontario Institute for Studies in Education, Toronto 1975. Pp. 175.

Written in response to what the authors perceive as the need for an examination of the role manpower programs play as components of public policy, this monograph looks at the basic question of what constitutes manpower policy (terminology, resources, public education, drafting of policy); its objectives; the role played by governments in developing aims and the carrying out of such policies, in particular as they apply to the province of Ontario.

Guy Benveniste and Charles Benson, *From Mass to Universal Education: Educating Man for the 21st Century*, Vol. 12. Martinus Nijhoff, The Hague, 1976. Pp. 125. 32.50 gldrs.

This volume, part of a broad project devoted to the examination of education and educational structures in Europe, is the only work dealing with a non-European country and written by non-European authors. It attempts to discover whether education in Europe in the year 2000 will or should resemble education in California today. Previously published volumes in this series include, among

others, *Individual Orientation in Education* by M. Reuchlin Talant, *Equality and Meritocracy* by Torsten Husen.

N.L. Gage, ed., *The Psychology of Teaching Methods; the Seventy-fifth Yearbook of the National Society for the Study of Education*. The National Society for the Study of Education, Chicago, 1976. Pp. 435. \$13.00.

This volume, published by National Society for the Study of Education collects a series of articles dealing with methods of transmitting knowledge. Material in this study addresses itself to the psychology of teaching methods; the learning basis of teaching methods; programmed and computer-assisted instruction; teaching

## TEACHING...from p.12

disciplinary programs, and increased interest in the problems of teaching within the American Philosophical Association. The early visibility of philosophy to potential students is also being encouraged through attempts to introduce philosophy into the school curriculum. The teaching of philosophy is complicated by the fact that the subject matter has never been as readily accessible even to the educated public as literature and the arts, and casual readers have found it difficult to proceed on their own beyond the most elementary philosophical writings. Perhaps the main problem for professional teachers of philosophy is that of transmitting an appreciation of the technicalities of rigorous and critical thought without quelling students' original enthusiasm to investigate sweeping general questions about life and its meaning.

This problems raises a question about the nature of philosophy itself. Is it a purely reflective subject, dealing in wholly conceptual terms with the structures of existence? Or should it provide guidance to scientists and artists in their creative work and to politicians and citizens alike in the conduct of everyday life? The learning experiences described in this Report relate to both facets of this controversy. For example, a course in Ethics uses a pre-course questionnaire to overcome students' biases against the critical examination of assumptions in their everyday behaviour as a prelude to developing intellectual maturity in dealing with ethical issues. An intimate connection between thought and action is established in an interdisciplinary course in Philosophy and Technology which deals with the problem of contemporary decentralization in the

with simulation and games; teaching with television; classroom instruction and teachers' decision making.

Murray G. Ross, *The University: the Anatomy of the Academe*. McGraw-Hill, Toronto, 1976. Pp. 310. \$13.25.

This book, through several stages, examines various components of the university: students, academics and administrators. It searches out goals, directions university governance has taken, the role of academic freedom in universities and the part played by the state in the running of universities. Subjects are placed in historical perspective, thus linking the university (once a segregated, relatively autonomous institution) to all areas of society.

world of work, leading students through philosophical considerations to the creation of a small-scale enterprise, the Blinding Light Candle Company. In contrast, a basic course at a small liberal arts college which attracts more registrants than any other course illustrates the success of a non-innovative, classics-oriented approach to quickening the philosophical impulse in students who plan to enter politics, law, business, medicine, and the ministry. Translating the aims of a course in Logical Thinking into clear behavioural objectives enables teachers of large sections to adapt the computerized Teacher Information Processing System (TIPS), described above, to an individualized, competency-based mode of instruction which achieves significant improvement in student performance. Increased student motivation is claimed for a variety of other techniques, including flexible short courses, interdisciplinary minicourses, and a single open classroom facility for variable-credit philosophy courses.

None of the programs described in this Report claim to be complete models of effectiveness; in fact, many of them have not experienced formal evaluation. However, they have achieved varying degrees of success in making the instructional process less ambivalent and more efficient, and have established a greater congruence between their purposes and the products of their efforts. Most important of all, they appear to have increased learning and attitudes towards learning, and this is what the craft and art of teaching is all about.

James B. Hartman



# Vacancies

# Postes vacants

## NOTICE AVIS

New address for the CAUT Bulletin.  
Advertising Office is: Suite 1001, 75 Albert Street, Ottawa, Ont. K1P 5E7.  
La nouvelle adresse des services publicité est: Suite 1001, 75 rue Albert, Ottawa, Ont. K1P 5E7.

### ACCOUNTING

**McMASTER UNIVERSITY Accounting:** Positions in Accounting. Rank open. Ph.D. completed or near completion. Duties to teach and do research in accounting. Areas to be covered: Managerial, Controllorship, Systems, and Financial. Salary appropriate for qualifications. Contact: W.J. Schlatter, Chairman of Accounting, Faculty of Business, McMaster University, Hamilton, Ontario, L8S 4M4. Effective date of appointment July 1, 1977. Closing date when position filled.

**UNIVERSITY OF WATERLOO Accounting:** Assistant or Associate Professor of Accounting: Ph.D., C.A. or M.B.A. with pertinent experience. Teaching undergraduate courses, research. 1976-77 Salary minima Assistant Professor \$15,900 Associate Professor \$20,600 Contact: Professor H. Herauf, Director, Accounting Program, Department of Economics, University of Waterloo, Waterloo, Ontario N2L 3G1. Effective date of appointment July 1, 1977.

### ADMINISTRATION

**UNIVERSITY OF NEW BRUNSWICK School of Administration:** Applications are invited for the undergraduate teaching positions that follow - Accounting, Finance, Management Organizational Behaviour, Marketing. Qualifications required are Ph.D. or Ph.D. candidate or equivalent. Duties involve undergraduate teaching and research. Rank and salary are based on the candidate's qualifications and experience. Appointments effective July 1, 1977. Direct inquiries to the Director, School of Administration, University of New Brunswick, Fredericton, New Brunswick E3B 5A3.

### AGRICULTURAL ENGINEERING

**MCGILL UNIVERSITY, Macdonald Campus Agricultural Engineering:** Applications are invited for the position of Assistant Professor of Agricultural Engineering. Duties include undergraduate and postgraduate teaching and research in one or more of the areas of agricultural structures, agricultural waste management, environment control or agricultural systems engineering. Salary will be commensurate with qualifications. Appointment to be made between June 1 and September 1, 1977. Applications will be considered until the position is filled. Applicants should send curriculum vitae, academic transcripts and a letter describing teaching and research interests, to the Chairman of the Staff Search Committee, Department of Agricultural Engineering, Macdonald Campus of McGill University, Ste. Anne de Bellevue, Quebec H0A 1C0, Canada.

### ARCHITECTURE

**CARLETON UNIVERSITY School of Architecture:** Applications are invited for one or two positions at the Assistant or Associate Professor level for the 1977-78 session at the School of Architecture, Carleton University. Qualifications should include a B.Arch. degree plus a higher degree or professional experience. Duties will include teaching in a design studio plus lectures in some area of specialization, eg. building technology, urban studies, behavioural science. Salary commensurate with experience, union scale. Application and curriculum vitae should be sent to the Director, School of Architecture, Carleton University, Ottawa, K1S 5B6.

**NOVA SCOTIA TECHNICAL COLLEGE Faculty of Architecture:** Applications are invited for the following two teaching positions. Building Construction: the applicant should be either an architect with a specialized interest in building construction

or a building construction specialist with an interest in architecture. Design: the applicant should be an architect with a postgraduate degree in another subject. Duties involve both lecturing and participation in studio design projects. Relevant professional or research experience is mandatory. Send curriculum vitae and references to Professor Anthony Jackson, Acting Dean, Faculty of Architecture, Nova Scotia Technical College, P.O. Box 1000, Halifax, Nova Scotia B3J 2X4.

### ART HISTORY

**CARLETON UNIVERSITY Art History** has a vacancy for a specialist in Canadian art to teach at graduate and undergraduate levels. MA or PhD in Art History. Rank open. Date of appointment 1 July, 1977. Apply with names of three referees to Dr. David Burnett, Chairman, Department of Art History, Carleton University, Ottawa, Ontario K1S 5B6.

**CARLETON UNIVERSITY Art History** has a vacancy for a one year term appointment effective from 1 July 1977. Specialist in 17th Century European art with Ph.D. preferred. Date of appointment 1 July, 1977. Apply with names of three referees to Dr. David Burnett, Chairman, Department of Art History, Carleton University, Ottawa, Ontario K1S 5B6.

### BIOCHEMISTRY

**McMASTER UNIVERSITY Department of Biochemistry:** Applications are invited for a teaching postdoctoral position. The responsibilities will include supervision of Year III and Year IV laboratories (25-35% of time) and research on mitochondrial biogenesis in mammalian cells. Expertise in nucleic acid, enzymes or phospholipids is preferred. The appointment would start July 1, 1977. The salary would depend on qualifications. Applications should be sent to Dr. K.B. Freeman, Chairman, Department of Biochemistry, McMaster University, Hamilton, Ontario. L8S 4J9.

### BIOLOGICAL SCIENCE

**UNIVERSITY OF GUELPH College of Biological Science:** Socio-Biologist to offer human socio-biology undergraduate courses for B.Sc. degrees in human biology and human kinetics. Capacity to offer courses in related domains of human biology advantageous. Ability to produce quality research important. Appointment with intention of permanent position. For more information contact Dr. J.D. Brooke, College of Biological Science, University of Guelph, Guelph, Ontario. N1G 2W1.

**UNIVERSITY OF GUELPH College of Biological Science:** Human Biologist to offer developmental human biology undergraduate courses for B.Sc. Degrees in human biology and human kinetics. Growth and / or Degeneration studies relevant. Capacity to offer courses in related domains of human biology or in ergonomics / human factors advantageous. Ability to produce quality research important. Appointment with intention of permanent position. For more information contact Dr. J.D. Brooke, College of Biological Science, University of Guelph, Guelph, Ontario N1G 2W1.

**UNIVERSITY OF GUELPH College of Biological Science:** Ergonomist with training in human biology or equivalent to develop ergonomics / human factors courses for senior years of undergraduate degrees in human biology and human kinetics. Capacity to offer courses in earlier years in learning theory, physiological psychology or developmental human biology advantageous. Ability to produce quality research important. Appointment can lead

to permanent position. For more information contact Dr. J.D. Brooke, College of Biological Science, University of Guelph, Guelph, Ontario N1G 2W1.

### BIOLOGY

**UNIVERSITY OF CALGARY Department of Biology:** (Instructorship in invertebrate Zoology) Responsibilities will be planning, direction and coordination of laboratories in multi-sectioned courses in Invertebrate Zoology. Applicants should have strong commitments to undergraduate teaching and should have at least a Master's degree. Anticipated starting date is July 1, 1977. The salary floor for the rank of Instructor is \$13,100. (Likely to be adjusted effective July 1, 1977) Applicants should send curriculum vitae and name and addresses of 3 referees to: Dr. J.H. Williamson, Head, Department of Biology, University of Calgary, Calgary, Alberta, T2N 1N4 by May 1, 1977.

**CONCORDIA UNIVERSITY (Loyola Campus) Biology Department:** Sabbatical replacement at the rank of lecturer or assistant professor for one academic year. Ph.D. or M.Sc. with experience in vertebrate anatomy and histology. Undergraduate teaching in comparative vertebrate anatomy, histology and microscope techniques. 1976-77 floors; lecturer \$13,095; Assistant Professor \$16,576. Send curriculum vitae and three letters of reference to Dr. R.T. Cronin, S.J., Chairman, Biology Department, Loyola Campus, Concordia University, Montreal, P.Q. H4B 1R6. Effective date of appointment June 1, 1977 to May 31, 1978. Closing date when position filled.

**UNIVERSITY OF NEW BRUNSWICK (Saint John Campus) Division of Science:** Applications are invited for the position of Assistant Professor of Biology. The appointment will take effect, subject to budgetary approval, on July 1, 1977, or later. The successful applicant will be expected to teach undergraduate courses in marine botany, general botany, and introductory plant physiology, and to develop an active research programme. Applicants should have a doctorate with specialization in marine botany, and should send a curriculum vitae and the names of three referees to the Chairman, Search Committee, Division of Science, University of New Brunswick, Saint John, N.B. E2L 4L5.

**MEMORIAL UNIVERSITY OF NEWFOUNDLAND Department of Biology:** Subject to budgetary approval, an Entomologist will be required at the Assistant or Associate Professor level by the Department of Biology for September 1, 1977. The successful applicant will be expected to teach introductory and graduate level courses in Entomology and related areas, and to carry out research in an appropriate field. Candidates should have a strong background in insect systematics and ecology. Applications with a curriculum vitae and the names of three referees should be sent to Dr. G.R. South, Head, Department of Biology, Memorial University of Newfoundland, St. John's Newfoundland A1C 5S7. The closing date for applications is when position filled.

**TRENT UNIVERSITY Department of Biology:** A faculty position at the Assistant Professor level is open for a biologist with a background in wildlife biology or theoretical ecology and with special interest and experience in ornithology, herpetology or mammalogy. The main duties would be to teach a half course in WILDLIFE BIOLOGY, and to assist in two introductory courses. The appointment is

sessional and commences on July 1, 1977. The salary would be commensurate with the applicant's qualifications and experience. Ph.D. required. Applications or enquiries should include a curriculum vitae and the names of three references, and should be sent to: The Chairman, Faculty Search Committee, Trent University, Peterborough, Ontario, Canada K9J 7B8. Closing date for receipt of applications: when position filled.

### BUSINESS

**UNIVERSITY OF CALGARY Faculty of Business:** Applications are invited for Assistant / Associate / Full Professor to teach Organization Theory, Labor Relations, or Public Management, beginning July, 1977. Qualifications required are doctorate, teaching experience, and strong research potential. Rank and salary are open and competitive. Direct all inquiries to Dr. Perry H. Cunningham, Chairman, Management Area, Faculty of Business, The University of Calgary, Calgary, Alberta. T2N 1N4.

**UNIVERSITY OF CALGARY Faculty of Business:** Applications are invited for academic positions in Accounting. Qualifications required are doctorate or dissertation near completion. Duties involve undergraduate and graduate teaching and research. Rank and salary based on experience. Direct all inquiries to Dr. C.A. Prentice, Chairman, Accounting Area, Faculty of Business, The University of Calgary, Calgary, Alberta T2N 1N4.

**UNIVERSITY OF CALGARY Faculty of Business:** Applications are invited for Assistant / Associate / Full Professor to teach Organization Theory, Labor Relations, or Public Management, beginning July 1, 1977. Qualifications required are doctorate, teaching experience, and strong research potential. Rank and salary are open and competitive. Direct inquiries to Dr. Perry H. Cunningham, Chairman, Management Area, Faculty of Business, The University of Calgary, Calgary, Alberta. T2N 1N4.

**THE UNIVERSITY OF CALGARY Faculty of Business:** Applications are invited for academic positions in Business Policy. Qualifications required are an advanced degree. Considerable business or government experience is very desirable. Ability to teach Introduction to Business, Business Strategy, Business Communications, or Public Administration is a definite plus. Duties involve undergraduate and graduate teaching and research. Rank and salary are based on qualifications and experience. Appointments effective July 1, 1977. Direct all enquiries to Dr. Robert A. Scholz, Chairman, Policy and Environment Area, Faculty of Business, The University of Calgary, Calgary, Alberta T2N 1N4.

**UNIVERSITY OF CALGARY Faculty of Business:** Applications are invited for Assistant / Associate / Full Professor to teach Marketing Courses at both the graduate and undergraduate level beginning July 1, 1977. Qualifications required are doctorate, teaching experience, and strong research potential. Rank and salary are open and competitive. Direct inquiries to: Mr. H. Vogel, Chairman, Marketing Area, Faculty of Business, The University of Calgary, Calgary, Alberta T2N 1N4.

**THE UNIVERSITY OF CALGARY Faculty of Business:** Applications are invited for academic positions in Business Communications (written and oral). Considerable business, government, or teaching experience is very desirable.



Duties involve undergraduate teaching and the future possibilities of graduate teaching and research. Rank and salary are based on qualifications and experience. Appointments effective July 1, 1977. Direct all enquiries to Dr. Robert A. Scholz, Chairman, Policy and Environment Area, Faculty of Business, the University of Calgary, Calgary, Alberta, T2N 1N4.

**THE UNIVERSITY OF CALGARY** Faculty of Business: Applications are invited for academic positions in Business Law. Qualifications required are a law degree and / or an M.B.A. Considerable experience is helpful. Duties involve undergraduate and graduate teaching and research. Rank and salary are based on qualifications and experience. Appointments effective July 1, 1977. Direct all enquiries to Dr. Robert A. Scholz, Chairman, Policy and Environment Area, Faculty of Business, The University of Calgary, Calgary, Alberta T2N 1N4.

**McMASTER UNIVERSITY** Faculty of Business: Applications are invited for the position of Assistant Professor of Management Information Systems. Candidates should have the doctorate completed or near completion. Duties include graduate and undergraduate teaching and research in management information systems. Applicants should provide a curriculum vitae, academic transcripts. A brief description of teaching and research interests and names of references to Dr. A.Z. Szendrovits, Chairman, Production and Management Science Area, Faculty of Business, McMaster University, Hamilton, Ontario L8S 4M4.

**McMASTER UNIVERSITY** Faculty of Business: Academic vacancy: Marketing Area, Faculty of Business, Assistant or Associate Professor level. Doctorate or dissertation in progress required. Duties include research and teaching at the graduate and undergraduate levels with interests in

distribution and retail management. Salary open. Contact: Dr. Bent Stidsen, Chairman, Marketing Area, Faculty of Business, McMaster University, Hamilton, Ontario L8S 4M4. Effective date of appointment January 1st or July 1st, 1977. Closing date when position filled.

**McMASTER UNIVERSITY** Faculty of Business: Rank open in Finance. Doctorate or dissertation in progress. Research and teaching at the graduate and undergraduate levels with interests in managerial finance, securities and / or income taxation. Salary open. Contact: Dr. Stanley N. Laiken, Chairman, Finance Area, Faculty of Business, McMaster University, Hamilton, Ontario L8S 4M4. Effective date of appointment July 1, 1977 (January 1, 1977 possible). Closing date for applications when filled.

**McMASTER UNIVERSITY** Faculty of Business: Marketing area. Assistant or Associate Professor level. Doctorate or dissertation in progress. Research and teaching at the graduate and undergraduate levels with interests in distribution and retail management. Salary open. Contact: Dr. Bent Stidsen, Chairman, Marketing Area, Faculty of Business, McMaster University, Hamilton, Ontario L8S 4M4. Effective date January 1st or July 1st, 1977. Closed when filled.

**McMASTER UNIVERSITY** Faculty of Business: Academic vacancy. Rank open in Finance. Doctorate or dissertation in progress. Research and teaching at the graduate and undergraduate levels with interests in managerial finance, securities and / or income taxation. Salary open. Contact: Dr. Stanley N. Laiken, Chairman, Finance Area, Faculty of Business, McMaster University, Hamilton, Ontario L8S 4M4. Effective date July 1, 1977. Closing date when filled.

**McMASTER UNIVERSITY** Faculty of Business: Positions in accounting. Rank open. Ph.D. completed or near completion. Teach and do research in accounting. Areas to be covered: Managerial, Controllershship, Systems, and Financial. Salary appropriate for qualifications. W.J. Schlatter, Chairman of Accounting, Faculty of Business, McMaster University, Hamilton, Ontario, L8S 4M4. Effective date July 1, 1977. Closed when post filled.

**McMASTER UNIVERSITY** Business Faculty: Applications are invited for the position of Assistant Professor of Management Science. Candidates should have the doctorate completed and, preferably, should also have some teaching and research experience. Duties include graduate and undergraduate teaching and research. Applicants should provide a curriculum vitae, academic transcripts, a brief description of teaching and research interests and names of references to Dr. A.Z. Szendrovits, Chairman Production and Management Science Area, Faculty of Business, McMaster University, Hamilton, Ontario, L8S 4M4.

**McMASTER UNIVERSITY** Faculty of Business: Faculty position at the rank of Full, Associate or Assistant Professor in the Personnel and Industrial Relations Area commencing July 1, 1977. Successful candidate will be expected to make a strong contribution to research in Industrial Relations and to teach graduate and undergraduate students, in such subjects as organizational behaviour, personnel management and labour relations. Send curriculum vitae to: Dr. Roy J. Adams, Chairman, Personnel and Industrial Relations Area, Faculty of Business, McMaster University, Hamilton, Ontario L8S 4M4.

**MOUNT SAINT VINCENT UNIVERSITY** Department of Business (Secretarial): Applications are invited for the position of Lecturer / or Assistant Professor in secretarial and office administrative studies. Qualifications for the position are a Master's Degree in Business Education with undergraduate studies in Secretarial Science. Teaching experience in the skill subjects, communications, data processing, records management is desirable. Position available July 1, 1977. Salary in accordance with qualifications and experience. In-

quiries should be addressed to: Chairman, Business-Secretarial Department, Mount Saint Vincent University, Halifax, Nova Scotia B3M 2J6.

#### BUSINESS ADMINISTRATION

**McMASTER UNIVERSITY** Business Administration Faculty: Applications are invited for a position of Assistant Professor of Management Information Systems. Candidates should have the doctorate completed or near completion. Duties include graduate and undergraduate teaching and research in management information systems. Applicants should provide a curriculum vitae, academic transcripts, a brief description of teaching and research interests and names of references to Dr. A. Z. Szendrovits, Chairman, Production and Management Science Area, Faculty of Business, McMaster University, Hamilton, Ontario L8S 4M4.

**McMASTER UNIVERSITY** Business Administration: Applications are invited for the position of Assistant Professor of Management Science. Candidates should have the doctorate completed and, preferably, should also have some teaching and research experience. Duties include graduate and undergraduate teaching and research. Applicants should provide a curriculum vitae, academic transcripts, a brief description of teaching and research interests and names of references to Dr. A. Z. Szendrovits, Chairman, Production and Management Science Area, Faculty of Business, McMaster University, Hamilton, Ontario, L8S 4M4.

**ST. FRANCIS XAVIER UNIVERSITY** Department of Business Administration: Applications are invited from persons interested in teaching undergraduate business administration courses, especially marketing. Minimum qualification is MBA. Doctorate and / or teaching or business experience is preferred. Rank and salary depend upon qualifications. Position(s) will be filled for September 1977 subject to budget approval. Send resumes to John T. Sears, Dean of Arts and of Science, St. F.X. University, Antigonish, Nova Scotia, B2G 1C0.

#### CHEMISTRY

**UNIVERSITY OF CALGARY** Department of Chemistry: Assistant Professor Appointment. Vacancy for an Assistant Professor in Biochemistry, available on August 1, 1977. Preference will be given to a Ph.D. biochemist of proven research ability. Excellent facilities and a competitive salary are available. Close collaboration with the Faculty of Medicine is possible. Development of an active research program and excellence in undergraduate and graduate (M.Sc., Ph.D.) instruction are expected. Closing date for applications is April 15, 1977. Send Curriculum vitae, synopsis of research plans, and arrange for 3 letters of reference to be sent to Dr. G. I. Drummond, Chairman of Search Committee, Department of Chemistry, The University of Calgary, Calgary, Alberta, T2N 1N4 Canada.

**UNIVERSITY OF GUELPH** Department of Chemistry: Applications are invited for a regular faculty position in the area of biochemistry. Salary and rank commensurate with qualifications and experience. Starting date September 1, 1977. Candidates must have a Ph.D. degree in biochemistry or chemistry and at least one year of post-doctoral experience. Duties will include undergraduate and graduate teaching, supervision of graduate research, and independent research. Applicants should provide a complete curriculum vitae, a research proposal, reprints of papers, a transcript of academic record if applying at a junior level, and the names of three referees to E.G. Janzen, Chairman, Department of Chemistry, University of Guelph, Guelph, Ontario, Canada. Applications should be sent as soon as possible but no later than April 15, 1977.

**UNIVERSITY OF VICTORIA** Department of Chemistry: Visiting Faculty Applications for visiting faculty positions in the areas of organic and organic-analytical chemistry are invited for appointments in

#### THE CAUT BULLETIN

Editor: I. Cinman

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### Université de Montréal Faculté des arts et des sciences DEPARTEMENT DE PHYSIQUE

### Poste de professeur en astronomie optique

Un poste de professeur est maintenant disponible au Département de physique de l'Université de Montréal. Le candidat devra accepter de participer à la mise au point de l'équipement scientifique d'un nouvel observatoire astronomique dont l'instrument principal sera un télescope d'environ 1,5m. d'ouverture. Il contribuera aussi aux programmes de recherche et d'enseignement du Département.

L'engagement pourra se faire dès l'été 1977. Le rang académique (adjoint, agrégé ou titulaire) et le traitement sont en raison des qualifications et de l'expérience.

Les personnes intéressées sont priées de faire parvenir leur curriculum vitae, les noms de deux répondants et toute autre documentation, à l'adresse suivante:

Le Directeur  
Département de physique  
Université de Montréal  
C.P. 6128  
Montréal, Québec  
H3C 3J7



the 1977-78 academic year. Applicants should be prepared to teach at both an introductory and a more senior level. Applications with curriculum vitae and the names of three referees should be forwarded to: Dr. A.D. Kirk, Chairman, Department of Chemistry, University of Victoria, Victoria B.C. V8W 2Y2 The University of Victoria reserves the right not to fill these positions.

#### CHINESE

**UNIVERSITY OF CALGARY** Department of Germanic and Slavic Studies: Subject to the availability of funds, the Department of Germanic and Slavic Studies invites applications for a full-time two-year term appointment in Chinese Language, preferably at the Assistant Professor level, to begin July 1, 1977. Candidates should hold advanced degrees and have teaching experience. Salary will be commensurate with qualifications. Men and women may apply. Curriculum vitae, and the names of three referees, should be sent to: Dr. R.S. Struc, Head, Department of Germanic and Slavic Studies, The University of Calgary, Calgary, Alberta, Canada T2N 1N4. Candidates are requested to submit their applications as early as possible. Closing date: when the position is filled.

#### CLASSICS AND ROMANCE LANGUAGES

**UNIVERSITY OF WATERLOO** Classics and Romance Languages: One year appointment (sabbatical replacement) Specialization in Spanish American Literature — Ph.D. preferred. Duties include teaching beginning and intermediate Spanish and some literature courses. Salary and rank commensurate with experience. Contact: Dr. J.R. Dugan, Chairman, Department of Classics and Romance Languages, University of Waterloo, Waterloo, Ontario N2L 3G1 Date of appointment July 1, 1977. Closing date March 31, 1977 Please submit curriculum vitae and the names of 3 referees.

#### COMMERCE

**CARLETON UNIVERSITY** School of Commerce: Applications are invited for the position of Instructor in Accounting. Candidates should possess a MBA, CA or MBA with major in Accounting. Reply with a full curriculum vitae and the names of three referees to: J.B. Waugh, Director, School of Commerce, Carleton University, Ottawa, K1S 5B6.

**CARLETON UNIVERSITY** School of Commerce: Applications are invited for positions in Organizational Behaviour, or Accounting at the rank of Assistant or Associate Professor. Candidates should hold a Ph.D. or be near completion of the Doctoral requirements. Term appointments will be considered for applicants who contemplate Ph.D. studies at a later date. Reply with a full curriculum vitae and the names of three referees to: J. B. Waugh, Director, School of Commerce, Carleton University, Ottawa K1S 5B6.

#### COMPUTER SCIENCE

**CONCORDIA UNIVERSITY** Department of Computer Science: Applications are invited for an Assistant Professor's position in the Computer Science Department, commencing duties on July 1, 1977. Applicants should have a Ph.D. in Computer Science with demonstrated research/industrial experience and interest in teaching undergraduate/graduate courses in any three of the following areas: programming languages, advanced programming techniques, data base design, simulation, data processing management, operating systems and commercial software packages. Please send applications with the resume and the names of 3 referees to: Dr. A.K. Menon, Chairman, Department of Computer Science, Concordia University (Loyola Campus), 7141 Sherbrooke St. West, Montreal, Quebec H4B 1R6 Deadline — April 30, 1977.

**MEMORIAL UNIVERSITY OF NEWFOUNDLAND** Department of Mathematics, Statistics and Computer Science: Faculty position at the rank of Assistant, Associate, or Full Professor in Computer Science. Ph.D. in Computer Science required. Duties: Teaching at the undergraduate level, curriculum develop-

ment and assisting in the development of a graduate program, departmental responsibilities and research. Appointment to be made as soon as possible. Salary negotiable. Send vitae and names of three references to: Professor J.H. Burry, Head, Department of Mathematics, Statistics and Computer Science, Memorial University of Newfoundland, St. John's, Newfoundland, A1C 5S7 Canada.

**UNIVERSITY OF WATERLOO** Computer Science: Assistant Professor (s). Qualifications required Ph.D. in Computer Science. Duties include Teaching and research. Preferred interest areas are: Data Bases, computer architecture, systems analysis, and compilation. Salary offered 1976-77 was \$15,700. Contact: Dr. J.D. Lawson, Department of Computer Science, University of Waterloo, Waterloo, Ontario N2L 3G1 Effective date of appointment July 1, 1977, (negotiable).

**UNIVERSITY OF WATERLOO** Computer Science: Associate Professor. Ph.D. required and considerable research experience. Duties include teaching, research, and Graduate supervision. Preferred interest areas are: data bases, computer architecture, systems analysis and programming languages. Salary open. Contact: Dr. J.D. Lawson, Department of Computer Science, University of Waterloo, Waterloo, Ontario N2L 3G1.

**YORK UNIVERSITY** Department of Computer Science: Applications are invited for a possible appointment at the level of Assistant or Associate Professor in the tenure stream, to begin July 1, 1977, (subject to budget approval). Ph.D. in Computer Science desirable. Duties involve active participation in undergraduate teaching programme, curriculum development, and research. Preference will be given to candidates with research interests and/or experience in an interdisciplinary area or in an application area such as graphics, information systems, minicomputer systems, or software development. University computing facilities include access to IBM 370-158 and DEC System 10. Department maintains Interdata-60 and peripherals, including graphics terminal. Minimum salary: \$15,660 (Asst. Prof. floor). Submit curriculum vitae and names of three referees to: Professor P.H. Posen-Runge, Chairman, Department of Computer Science, York University, 4700 Keele Street, Downsview, Ontario M3J 1P3.

#### CURRICULUM AND INSTRUCTION

**MEMORIAL UNIVERSITY OF NEWFOUNDLAND** Curriculum & Instruction: Assistant Professor. The position involves developing a program in Native Education and teaching undergraduate courses in that area. Relevant experience desirable. Salary open. Dr. F. Riggs, Department of Curriculum & Instruction, Memorial University of Newfoundland, St. John's, Newfoundland. When position filled.

**MEMORIAL UNIVERSITY OF NEWFOUNDLAND** Curriculum and Instruction: Reading position. Doctoral degree, teaching experience in the area of reading. Duties include undergraduate and graduate instruction in reading. Salary and rank commensurate with qualifications and experience. Apply to: Dr. F. Riggs, Head, Department of Curriculum and Instruction, Faculty of Education, Memorial University of Newfoundland, A1C 5S7. Include Curriculum Vitae and names of three referees. Effective date of appointment January 1st or September 1, 1977. Deadline for applications: when post filled.

**MEMORIAL UNIVERSITY OF NEWFOUNDLAND** Department of Curriculum and Instruction: Position of Music Education. Qualifications are advanced degree in Music Education — special expertise in low brasses would be an advantage. Nature of duties include teaching undergraduate courses in Music Education with some possible involvement in teaching undergraduate music courses. Salary and rank are to be commensurate with qualifications and experience. Apply to Dr. Frank Riggs, Head, Department of

Curriculum and Instruction, Faculty of Education, Memorial University of Newfoundland, St. John's Newfoundland A1C 5S7. Effective date of appointment is September 1, 1977. Deadline for applications is when position filled.

**MEMORIAL UNIVERSITY OF NEWFOUNDLAND** Curriculum and Instruction: Position in Religious Education. Qualifications: Graduate degree, teaching experience at the school and university level. Undergraduate instruction in religion education. Salary and rank commensurate with qualifications and experience. Apply to: Dr. Frank Riggs, Head, Department of Curriculum and Instruction, Faculty of Education, Memorial University of Newfoundland, St. John's, Newfoundland A1C 5S7 Effective date of appointment September 1st, 1977. Deadline for application is when position filled.

**MEMORIAL UNIVERSITY OF NEWFOUNDLAND** Curriculum and Instruction: Position in Art Education. Qualifications Doctorate or dissertation stage. Teach undergraduate courses in Art Education on Primary, Elementary, and Secondary Teacher Education Programs. Salary commensurate with qualifications and experience. Dr. Frank Riggs, Head, Department of Curriculum and Instruction, Faculty of Education, Memorial University of Newfoundland, St. John's Newfoundland A1C 5S7. Effective date of appointment September 1st, 1977. Deadline for applications is when position filled.

#### DENTISTRY

**UNIVERSITY OF BRITISH COLUMBIA** Faculty of Dentistry: Applications are invited for a full-time position in the Department of Restorative Dentistry effective 1st July, 1977. Preference will be given to candidates with experience in the teaching and Removable Prosthodontics in a North American University and eligible for the Royal College of Dentists of Canada speciality examinations. An advanced degree in Prosthodontics is a definite asset.

Salary and rank are negotiable and will depend on qualifications and experience. Selection of the successful candidate will be made on the recommendation of a selection committee. Applicants are requested to submit their Curriculum Vitae and the names of three referees to: Dr. T.J. Harrop, Chairman, Department of Restorative Dentistry, Faculty of Dentistry, University of British Columbia, 2075 Wesbrook Place, Vancouver, B.C. V6T 1W5 Canada.

**UNIVERSITY OF BRITISH COLUMBIA** Faculty of Dentistry: Applications are invited for the position of a temporary appointment in the Department of Restorative Dentistry, Faculty of Dentistry, September 1st, 1977 to June 30th, 1978. Preference will be given to candidates qualified to teach Fixed Prosthodontics, with experience in a North American University. Salary and rank will be negotiated. Applicants are requested to submit their Curriculum Vitae and the names of three referees to: Dr. T.J. Harrop, Chairman, Department of Restorative Dentistry, Faculty of Dentistry, University of British Columbia, 2075 Wesbrook Place, Vancouver, B.C. V6T 1W5 Canada.

**UNIVERSITY OF TORONTO** Dentistry: The University of Toronto, Faculty of Dentistry, has initiated a search for full-time professor of clinical dentistry. The appointee will be under the general direction of the Director of Clinics. He or she will be responsible for the development of an experimental comprehensive dental care unit. In addition, the appointee must have the background in clinical dentistry and clinical research required to act as a coordinator for the development of learning-teaching resources and to initiate and supervise in-service programs for full and part-time clinical staff as they relate to educational theory and methodology. Academic rank and salary commensurate with qualifications. Applicants should send a curriculum vitae to: Dr. Donald G. Woodside, Chairman, Search Committee,



## The University Of Prince Edward Island

Invites Nominations and Applications  
for the Position of

# PRESIDENT

The University of Prince Edward Island is the single provincial university, formed in 1969 by amalgamation of two of Canada's oldest institutions, Prince of Wales College and St. Dunstan's University. Baccalaureate degrees are offered in Arts, Science, Education, Business Administration and Music. Preparatory programs are offered in a number of professional areas. Enrollments are 1500 full time students and 900 part time and extension students.

The term of office will commence July 1, 1978. Written nominations and applications will be received in confidence until March 31, 1977 by:

A. James Larkin, Chairman, Presidential Search Committee  
University of Prince Edward Island, Charlottetown, P.E.I.



Faculty of Dentistry, University of Toronto, 124 Edward Street, Toronto, Ontario M5G 1G6.

#### DRAMA

**UNIVERSITY OF GUELPH** Drama Department: Applications are invited for the position of Lecturer in the Department of Drama, to teach theatre crafts, stage management, lighting and, perhaps, stage design. The applicant will also be expected to act as Technical Director for some productions. The appointment will be a contractually limited one for eight months, starting on September 1, 1977. Salary: \$12,000.00 Please send details of experience, etc., with names of three referees, to Professor E. Salmon, Chairman, Department of Drama, University of Guelph, Guelph, Ontario N1G 2W1.

**QUEENS UNIVERSITY** Drama Department: Position of Assistant Professor. Specialist in Theatre History, Dramatic Literature, Introduction to Theatre. Salary negotiable. Current floor for Assistant Professor is \$15,725 per year. (Appointment is for 10 months) Contact Marrice Breslow, Director of Drama, Queen's University, Kingston, Ontario K7L 3N6. Effective date of appointment is 1st September, 1977. Applications accepted until position filled.

**UNIVERSITY OF WATERLOO** Drama: The Drama group at the University of Waterloo expects, subject to final budget approval, to have a teaching position open during the 1977-78 academic year. This would be an eight month appointment (September - April) and the salary (dependent on rank) would probably be in the region of \$10,000.00 to \$11,000.00. The primary requirement is for someone to teach the first two levels of the acting stream. This person should have a strong secondary qualification in voice or movement, and he/she should be prepared as well to direct a workshop production for first year students. Please reply to the Chairman, Drama Department, University of Waterloo, Waterloo, Ontario N2L 3G1.

#### EARTH SCIENCES

**UNIVERSITY OF MANITOBA** Earth Sciences Department: invites applications for the position of Professor and Head of the Department of Earth Sciences. Currently there are 15 faculty members in the Department which offers undergraduate and graduate programs, and the laboratories and facilities provide a stimulating environment for research and teaching. Salary will be appropriate to the qualifications of the appointee. The floor at present for full professors is \$25,560.00. Applications should be made as soon as

possible, with a deadline of May 15, 1977, giving curriculum vitae, publication list and the names of three referees to: Dr. R.D. Connor, Dean of Science, University of Manitoba, Winnipeg, Manitoba, R3T 2N2.

#### ECONOMICS

**CONCORDIA UNIVERSITY** (Sir George Williams Campus) Department of Economics: Associate or Full Professor. Demonstrated record of high scholarly achievement in terms of publications and recognition in area of Public Finance. Graduate and some undergraduate teaching; supervision of Ph.D. dissertations. Salary commensurate with qualifications and experience. Salaries are fully competitive. Forward applications to Professor M. Stelcner, Chairman, Department of Economics, Concordia University (Sir George Williams Campus) Montreal. Date of Appointment — June 1, 1977. Applications accepted until position is filled.

**CONCORDIA UNIVERSITY** — Sir George Williams Campus — Department of Economics: Two or three appointments at Assistant or Associate levels. Commitment to excellence in teaching (graduate and undergraduate) and to visible research. Ph.D. completed. Various fields. Competitive salaries. Write to Professor M. Stelcner, Chairman, Department of Economics, Concordia University (Sir George Williams Campus), Montreal, Quebec, Date of appointment June 1, 1977.

**UNIVERSITY OF WATERLOO** Economics: Full Professor. Solid publication record. Research on Canadian Problems an asset. Duties include teaching and research. Salary competitive. Contact: Dr. Robert R. Kerton, Chairman, Department of Economics, University of Waterloo. Starting date negotiable.

#### EDUCATION

**UNIVERSITY OF ALBERTA** Department of Elementary Education: Applications are invited for a position in the area of Language Arts Education at the Assistant Professor rank. Candidates should have an academic background in the language arts area and teaching experience at the elementary level. Ph.D. required. Duties will include teaching in curriculum and instruction classes in language arts (reading and/or language). Supervision of student teachers. Salary range for 1976/77 is \$16,587 to \$21,542. Open to females or males. Applications including a current curriculum vitae and names of referees should be sent to Dr. A. MacKay, Chairman, Department of Elementary Education, The University of Alberta, Ed-

monton, Alberta by April 15, 1977.

**UNIVERSITY OF ALBERTA** Department of Secondary Education: Applications are invited for a proposed position in Home Economics Education at the Assistant Professor rank. Current salary range, under negotiation, is \$16,587 to \$21,542. Duties include undergraduate and possibly graduate teaching, and supervision of student teachers. Preference given to holders of doctoral degrees and relevant experience. Open to males or females. Applications, including curriculum vitae and names of referees should be sent to: Dr. G.L. Berry, Chairman, Department of Secondary Education, The University of Alberta, Edmonton, Alberta T6G 2E1.

**BRANDON UNIVERSITY** Faculty of Education: Applications are invited for one one-year appointment commencing September 1, 1977 in Developmental Reading and Curriculum Development Position will involve teaching courses in developmental reading and curriculum development in the Teacher Education Program at the Elementary level and will include the supervision of the student teacher. Rank: Lecturer or Assistant Professor Qualifications: Master's in Education minimum, Doctorate preferred. Salary open. Date of closing April 15, 1977. Apply to: Professor Rose-Marie Brew, Chairperson Selection Committee, Faculty of Education, Brandon University, Brandon, Manitoba. R7A 6A9.

**UNIVERSITY OF MANITOBA** Faculty of Education: a staff member is required to assume responsibility for teaching Physical Education methods at the elementary level to classroom teacher trainees as well as graduates of the School of Physical Education. The staff member would also be required to teach elective method courses in Movement Education, Rhythmic and Dance and Games, all at the elementary undergraduate level. Additional competencies in presenting courses in Physical Education for Learning Disabled Children and the Mentally Handicapped at the pre-Masters level. Supervision of student teaching and advising undergraduate and graduate students are included. Duties to commence 1st September, 1977. Qualifications: Ph.D. preferred or Master's Degree in Elementary Physical Education with formal teaching experience in these areas at the elementary school level. Salary: Depending upon qualifications and experience. Contact: Dr. Murray McPherson, Faculty of Education, University of Manitoba, Fort Garry Campus, Winnipeg, R3T 2N2. Tel.: 474-9013.

#### EDUCATIONAL FOUNDATIONS

**UNIVERSITY OF ALBERTA** Department of Educational Foundations: applications are invited for three sessional appointments for the period September 1977 to April 1978. The appointments will be made in the following areas: History of Canadian Education; History of Educational Thought; Sociology of Education. Candidates should send a letter of application and curriculum vitae to Dr. P.J. Miller, Chairman, Department of Educational Foundation, Faculty of Education, University of Alberta, Edmonton, Alberta. The deadline for receipt of applications is March 31, 1977. Preference will be given to Canadian citizens and landed immigrants. Open to female or male applicants.

#### ENGINEERING

**UNIVERSITY OF CALGARY** Faculty of Engineering: Applications are invited for three academic positions at the Assistant or Associate Professorial rank, effective September 1, 1977. The candidate will be expected to undertake undergraduate and graduate teaching as well as research in his area of specialization or in related areas. Since at least two of the three appointments will be at the Assistant Professorial rank for an initial three year term, these positions may be of particular interest to younger applicants who have recently completed their studies. Industrial experience is considered to be beneficial. Applications with a detailed resume and the names of three referees should be mailed prior to March 15, 1977 to: Dr. P.G.

Clockner, Head, Department of Mechanical Engineering, The University of Calgary, Calgary, Alberta, Canada T2N 1N4.

**UNIVERSITY OF SASKATCHEWAN** College of Engineering (Biomedical Engineering): Applications are invited for an appointment of Post-Doctoral Fellow/Research Associate in Biomedical Engineering. The appointment will be made on a full time research basis, in the area currently in progress: "On the Detection of Cardiovascular Abnormalities Via the Measurements and Processing of ECG and PCG". Applicants should have a good background in signal processing, computers, and basic training in biomedical engineering and cardiovascular systems with a strong inclination towards basic research. The research is conducted in cooperation with an option of extending it to a second year term. Curriculum vitae and names of three referees should be forwarded to: M.M. Gupta, Systems and Adaptive Control Research Laboratory, College of Engineering, University of Saskatchewan, Saskatoon, Saskatchewan, Canada. S7N 0W0. Possible appointment date April 1, 1977. Telephone (306) 343-3101.

**UNIVERSITY OF WATERLOO** Electrical Engineering: For the 1977-78 academic year applications are invited for post-doctoral fellowships, research associateships and visiting professorships in the following areas: Circuits and Computer aided Design; Systems and Control Power Engineering; Solid State Electronics; Electromagnetic Engineering; Bio-engineering and Computer Engineering. These appointments are for one or two year terms and are funded in full or in part from research grants and/or contracts. Contact: Professor K.D. Srivastava, Electrical Engineering, University of Waterloo, Waterloo, Ontario N1L 3G1. Effective date of appointment September 1, 1977.

**UNIVERSITY OF WATERLOO** Mechanical Engineering: An Assistant Professor, two-year definite term. Qualifications required are Ph.D. Nature of duties are: Teaching in thermodynamics, heat transfer, and other energy related topics; research in combustion sciences. Salary minima: \$15,900. Those interested should send applications to Dr. D.J. Burns, Chairman, Department of Mechanical Engineering, University of Waterloo, Waterloo, Ontario N2L 3G1. Effective date of appointment as soon as possible. Closing date for receipt of application is June 1, 1977.

#### ENGLISH

**CONCORDIA UNIVERSITY** (Loyola Campus) Department of English: Invites applications for a one-year leave replacement position at the assistant professor rank. Qualifications are Ph.D. in Canadian Literature with teaching experience if possible. The current floor for assistant professor salary is \$16,575.00. Apply, with curriculum vitae and names of three referees, to Dr. Patrick Holland, Chairman, Department of English, Concordia University (Loyola Campus), 7141 Sherbrooke St. West, Montreal, Quebec H4B 1R6.

#### ENVIRONMENTAL DESIGN

**UNIVERSITY OF CALGARY** Environmental Design: Academic appointment in planning policy or urban management and Director of the Urbanism Programme. Graduate interdisciplinary curriculum joins architecture and environmental science to urbanism in a framework of man-environment studies. Programme is accredited by the Canadian Institute of Planners. Candidates should be experienced university teachers or urban practitioners. Demonstrated administrative, research and project development skills are essential. Candidates with sound knowledge of Canadian planning/urban studies are preferred. Membership in C.I.P. desirable. Salary and rank appointment commensurate with qualifications and background. Appointment July 1, 1977 or earlier. Apply in writing, including C.V. and expression of interests to: Dean, W.T. Perks, Faculty of

## McGill University

### Faculty of Agriculture

Enquiries and nominations are invited for the position of

## Chairman of the Department of Agricultural Engineering

The appointee will be expected to provide innovative leadership in directing the Department's programs within the faculty and in the Canadian and Quebec context. Applicants should have an advanced degree in agricultural engineering or another branch of engineering with experience in the agricultural engineering field.

The Department offers a professional undergraduate degree as well as M.Sc. and Ph. D. program. The Department has active research in the areas of land improvement and drainage, hydrology, agricultural machine design and management, soil vehicle mechanics and soil-water-plant mechanics, waste management, materials handling and food engineering. The Department presently has an enrolment of 65 undergraduate students, and 15 graduate students. The staff comprise 6 professorial positions, 3 research associates, 5 research project engineers and a support staff of 7 technical and secretarial personnel.

Applications are encouraged before May 31, 1977. Appointment can become effective any time between July 1 and September 1, 1977. However, applications will be accepted until the position is filled. Candidates should include a review of academic, professorial, professional and research qualifications and experience, the names and addresses of three referees and an indication of the date of availability to take up the position.

Please reply to:

Chairman, Staff Search Committee  
Department of Agricultural Engineering  
Macdonald Campus of McGill University  
Ste-Anne de Bellevue, Quebec H0A 1C0, Canada



Environmental Design, The University of Calgary, Calgary, Alberta, Canada T2N 1N4. Telephone: (403) 284-6606.

### ENVIRONMENTAL AND RESOURCE STUDIES

**TRENT UNIVERSITY Environmental and Resource Studies Program:** Applications are tentatively invited for a temporary position teaching an interdisciplinary third-year course in Canadian Environmental Policy. Most appropriate disciplinary background: Economics or Political Science. Minimum background in interdisciplinary Master's Degree or M.A.; Ph.D. near completion preferred. Position may well be half-time, but all applicants will be considered when overall staffing needs are clearer sometime in March. Address applications to Professor R.C. Paehlke, Coordinator, Environmental and Resource Studies Program, Trent University, Peterborough, Ontario K9J 7B8.

### FINE ARTS

**CONCORDIA UNIVERSITY Faculty of Fine Arts:** The Faculty's Division of Performing Arts invites applications for the post of Costume Designer-Teacher to take charge of the costume area and teach in the Theatre Arts programme which offers B.F.A. degrees in Drama, Performance, Drama in Education, and Scenography. The Theatre Section presently comprises 8 full-time faculty members, including 4 in scenography, plus one full-time technical supervisor and paid student assistants. Qualifications: MFA degree or equivalent professional experience — Design, pattern drafting, and cutting experience is required — teaching experience at university or equivalent institution is desirable — bilingualism is considered an asset (French and English) Duties: Designing, cutting and supervising the execution of costumes for 4 to 6 productions each academic year — teaching courses in costume design and costume construction — interest and ability to teach in another area of theatre are highly desirable. The normal teaching load is three courses per year (18 credits). Production work is included as part of the teaching course load but a certain amount of work in production outside of the normal course load is expected. Rank and salary are negotiable depending upon qualifications and experience. The closing date for applications is March 15, or until filled. Applications should be accompanied by a complete curriculum vitae and a dossier including slides or photographs of design work, and three letters of reference of the names of at least three persons who are familiar with the applicant's work and who would be prepared to provide references. Please address all inquiries and/or applications to: Professor Joseph T. Cazalet, Director, Division of Performing Arts, Concordia University, 7141 Sherbrooke St. West, Montreal P.Q. H4B 1R6.

**UNIVERSITY OF WATERLOO Fine Arts:** Position of Lecturer, one year, definite term. Teaching six half-courses including, Fine 120, (intro design) Fine 324-325 (advanced drawing) Fine 226A (intaglio print-making) Contact: Virgil Burnett, Fine Arts, University of Waterloo, Waterloo, Ontario. Effective date of appointment July 1, 1977.

### FRENCH

**CARLETON UNIVERSITY Department of French:** Applications are invited for two positions of Instructor for period August 15, 1977 to May 15, 1978. Qualifications are B.A. or preferably M.A. with proven competence in teaching French to anglophone students. Familiarity with Dialogue method an asset. It is expected that the successful candidates will teach at elementary and intermediate levels up to average maximum of 15 hours weekly. Minimum salary, according to 1976-77 scale, will be not less than \$8,600 (but minimum may be raised for 1977-78). Those interested please forward full curriculum vitae and names of three referees to Dr. P. Clive, Chairman, Department of French, Carleton University, Ottawa, Ontario K1S 5B6. Closing date when position filled.

**UNIVERSITY OF MANITOBA French Department:** Full-time appointment ex-

pected to be made in French beginning in the fall of 1977. Ability to speak the language like a native, with good knowledge of English preferred. Should be able to teach courses in language, stylistics and translation at all levels. Candidates should have doctorate, or equivalent, and some teaching experience. Salary commensurate with qualifications and experience. Applications should be sent to C.A.E. Jensen, Head, Department of French and Spanish, University of Manitoba, Winnipeg, Manitoba. Closing date when position filled.

### GEOGRAPHY

**UNIVERSITY OF GUELPH Geography Department:** Two visiting positions, to replace faculty on sabbatical leave, for eight months or one year beginning on September 1, 1977. Rank and salary dependent on qualifications. 1. Geomorphologist. To teach introductory courses in geomorphology, to teach a second year course dealing with traditional and contemporary models of landscape

development, to participate in graduate geomorphology seminars, and to teach a first year course on climate, man and environment. Ph.D. preferred with research interests and experience in one or more of the following: eolian sediment transport; slope stability; coastal or fluvial; and periglacial-geomorphology. 2. Quantitative human geographer. Responsibilities to teach the following undergraduate courses: 1) a large introductory course dealing with theories and models of the spatial organization of society; 2) a first course on the use of statistical methods in geography; 3) an advanced course in statistical and modelling theory in geography. Guelph operates on the trimester system, with 13 week courses. Competition closes when the positions are filled. Send curriculum vitae and names of three referees to Dr. K. Kelly, Department of Geography, University of Guelph, Guelph, Ontario N1G 2W1.

**MEMORIAL UNIVERSITY OF NEWFOUNDLAND Geography Department:** Applications are invited from

Geographers for appointment at the Lecturer or Assistant Professor level, depending on experience and qualifications, effective September 1, 1977. Demonstrated competence in teaching introductory human and physical geography and ability to work with students beginning university studies essential. Successful applicants should be prepared to teach at either the St. John's or the Corner Brook campus of the University. If experience warrants, possibility of some teaching duties beyond first-year level. Submit curriculum vitae and names of three referees to: Chairman, Appointments Committee, Department of Geography, Memorial University of Newfoundland, St. John's, Newfoundland. Salary commensurate with experience and qualifications.

**YORK UNIVERSITY Department of Geography (Urban Geographer):** Applications are invited for a cross-appointed faculty position in the Department of Geography and the Urban Studies Programme (Division of Social Science) at York University. Applicants should have teaching and research interests in the political and/or economic aspects of urban development and must be willing to participate actively in an established interdisciplinary undergraduate programme in urban studies. An interest in applied work is desirable. Applicants must hold the Ph.D. and may expect to contribute at the undergraduate and graduate levels. Rank and salary commensurate with qualifications. Send applications including a Curriculum Vitae and the names of three referees to Dr. Edward S. Spence, Chairman, Department of Geography, York University, Downsview, Ontario M3J 1P3.

**YORK UNIVERSITY Geography:** Applications are invited for a cross-appointed faculty position in the Department of Geography and the Faculty of Environmental Studies at York University. Applicants are sought with particular teaching and research interests in the following areas: Ecosystem Simulation, Research Design, Environmental Impact Assessment, and Resource Management. Teaching responsibilities will be at both undergraduate and graduate levels. Candidates must have completed their Ph.D. Send applications including a Curriculum Vitae and names of three referees to Dr. Edward S. Spence, Chairman, Department of Geography, York University, Downsview, Ontario M3J 1P3.

### GEOLOGY

**CARLETON UNIVERSITY Department of Geology:** Applications are invited for a term appointment, part-time, at the Instructor level in Geology. Minimum salary (full-time) Instructor I — \$11,450/Instructor II — \$13,000: actual salary depending on qualifications and experience. Candidates with a B.Sc. (Honours) or an M.Sc. in Geology with two or more years relevant experience will be preferred. Responsibilities will include supervision and demonstration or undergraduate laboratory projects and lecturing in relation to laboratories at introductory level. Replies, with full particulars and references, should be sent to the Chairman, Department of Geology, Carleton University, Ottawa, Ontario K1S 5B6.

### GERMANIC AND SLAVIC LANGUAGES

**UNIVERSITY OF VICTORIA Department of Germanic Languages:** Regular full-time appointment as Assistant Professor of German commencing 1 July, 1977. Ph. D. and native or near native speaking ability, required. Candidates should have specialized in 19th-century literature and/or the teaching of language and translation. Expected floor salary \$16,850 per annum. Preference will be given to Canadians. Competition ends 31 March 1977 or when position filled. Apply to: Michael Hadley, Chairman, Department of Germanic Languages and Literature, University of Victoria, Box 1700 Victoria B.C. Canada V8W 1Y2.

### HEALTH SCIENCES

**UNIVERSITY OF WATERLOO Health Sciences:** Position of Biological / Health Sciences. Qualifications required are

## BRANDON UNIVERSITY

### Department of Political Science

Brandon University, Department of Political Science: Applications are invited for the position of Lecturer or Assistant Professor in Canadian politics. It is a one year appointment as Sabbatical replacement. Qualifications preferred are Ph.D. with specialization in Canadian politics. Duties include teaching courses in Canadian government, federalism, party politics, etc. (1976-77 Salary floors are: Lecturer \$13,000; Assistant Professor \$16,000). The appointment will begin on September 1, 1977. Applications with vitae, transcripts and references should be sent to Dr. M. V. Naidu, Head, Department of Political Science, Brandon University, Brandon, Manitoba R7A 6A9.

## President

### University of Windsor

#### Windsor, Ontario

The Presidential Search Committee of the University of Windsor invites nominations and applications for the position of President, the appointment to become effective September 1, 1978.

The University of Windsor is a provincially-supported institution, with a current full-time enrolment of 7,400 students and a part-time registration of 10,300 in Faculties of Arts, Social Science, Science and Mathematics, Business Administration, Education, Engineering, Human Kinetics, Law, and Graduate Studies.

Nominations, applications and inquiries should be submitted to the Committee no later than May 1, 1977.

The Secretary  
Presidential Search Committee  
University of Windsor  
Windsor, Ontario  
N9B 3P4



background in the medical or biological sciences and evidence of good teaching ability. Duties include research in the interdisciplinary health studies program and teaching of two introductory health courses and an upper year undergraduate or graduate course in area of interest related to disease prevention. Ph.D. degree required. Contact: Dr. R. G. Marteniuk, Department of Kinesiology, University of Waterloo, Waterloo, Ontario, Effective date of appointment July 1, 1977. Closing date for receipt of application April 30, 1977.

**UNIVERSITY OF WATERLOO Health Studies:** Position of Community Health Evaluation. Background in the medical or biological sciences with specific expertise in the evaluation of community health programs. Ph. D. degree required. Duties include research in areas of community health and evaluation of health programs and teaching of those areas at the upper year undergraduate and graduate levels. Rank and salary commensurate with experience in teaching and research. Contact:

Dr. D. G. Marteniuk, Department of Kinesiology, University of Waterloo, Waterloo, Ontario, Effective date of appointment July 1, 1977. Closing date of application is April 30, 1977.

#### HISTORY

**UNIVERSITY OF ALBERTA Department of History:** The Department of History, University of Alberta, will require, funds permitting, a sessional lecturer for eight months in the area of Modern British and European history for the academic year, 1977-78. Both men and women are invited to apply. Teaching duties will be in the area of junior survey courses. The minimum requirement is successful completion of doctoral candidacy examination. Those interested may send an application, transcripts and letters of reference (three) to: Professor W.J. Jones, Chairman, Department of History, University of Alberta, Edmonton, Alberta T6G 2H6.

**UNIVERSITY OF ALBERTA Department of History:** Temporary position in Canadian History. The Department of History,

University of Alberta, will require, funds permitting, a visiting assistant professor or sessional lecturer (for eight months) in Canadian history for the academic year, 1977-78. Both men and women are invited to apply. Teaching duties will be in the area of junior survey courses. The minimum requirement is successful completion of doctoral candidacy examination. Those interested may send an application, transcripts and letters of reference (three) to: Professor W.J. Jones, Chairman, Department of History, University of Alberta, Edmonton, Alberta T6G 2H6.

**THE UNIVERSITY OF CALGARY History Department:** seeks an Assistant Professor in European History, mainly of the last two centuries, preferably specializing in the Balkans and / or East Central Europe would be useful. The appointment is subject to budgetary approval. Ph.D. required. Salary range: \$15,630 — \$20,420. New salary scales are currently under negotiation. The appointment begins July 1, 1978, but candidates should indicate prior availability. Closing date for applications: March 31, 1977. Please send curriculum vitae and the names of three referees to: Dr. Donovan Williams, Head, Department of History, University of Calgary, 2920 - 24th Avenue, N.W., Calgary, Alberta, T2N 1N4.

**UNIVERSITY OF CALGARY Department of History:** The University of Calgary is seeking a joint appointment in Legal History with the Department of History and Faculty of Law at the Associate Professor level tenable July 1, 1977, subject to budgetary approval. Salary range: \$20,475 - \$27,105. New salary scales are currently under negotiation. Prospective candidates must hold degrees, or appropriate publications in both Law and History, have research and teaching experience in legal history, and publications in the field. Duties will consist of teaching in the Legal History programme of the Department of History; the legal history offerings in the University's programme of Law in the Liberal Arts; and appropriate courses in the Faculty of Law. Candidates will also be expected to become involved in the field of Canadian Legal History. The deadline for applications, which should include a full curriculum vitae and names of three referees, in March 31, 1977. They should be sent to: Dr. Donovan Williams, Head, Department of History, The University of Calgary, 2920 — 24th Avenue N.W., Calgary, Alberta T2N 1N4.

**UNIVERSITY OF CALGARY Department of History:** applications are invited for two positions at the junior assistant professor level in Canadian history, subject to budgetary approval. The appointment begins July 1, 1977. General areas of specialization: post-Confederation economic, social and intellectual, but other interests may be considered. Qualifications: Ph.D. (or near Ph.D.) essential. Salary range: \$15,630 - \$20,420. New salary scales are currently under negotiation. Closing date for applications: March 31, 1977. Please send curriculum vitae and names of three referees to: Dr. Donovan Williams, Head, Department of History, The University of Calgary, 2920 — 24th Avenue N.W., Calgary, T2N 1N4.

**UNIVERSITY OF TORONTO History Department (Early Modern French History) (Erindale):** Erindale College, wishes to make a one-year contractually-limited appointment in Early Modern French History at the rank of Assistant Professor or Lecturer. Preference will be given candidates who are also well prepared in Modern Europe. Ph. D., teaching experience and publications are preferred. The appointment will take effect from July 1, 1977, at a salary dependent on qualifications and experience. Closing date for application is when the position is filled. Applications and enquiries should be sent to Professor W. B. White, Erindale College, University of Toronto, Mississauga, Ontario L5L 1C6.

**YORK UNIVERSITY Department of History:** Applications are invited for a full time position in Canadian History, in the pre-Confederation field. Date of appointment July 1, 1977. Rank and salary open

Applications should be addressed to Professor Paul D. Stevens, Chairman, Department of History, York University, 4700 Keele Street, Downsview, Ontario M3J 1P3.

#### HOME ECONOMICS

**UNIVERSITY OF PRINCE EDWARD ISLAND.** Department of Home Economics: Applications are invited for a term Appointment in Clothing, Textiles and Design at the undergraduate level, effective July 1, 1977. The appointment depends on budgetary approval. Rank is dependent upon qualifications and experience. Applicants should hold a Ph. D. or Masters and should preferably, have some teaching experience. Applications with curriculum vitae and names of three referees should be sent to: Chairman, Home Economics Department, University of Prince Edward Island, Charlottetown, P.E.I. C1A 4P3.

#### HUMAN COMMUNICATION DISORDERS

**DALHOUSIE UNIVERSITY School of Human Communication Disorders:** Applications are being invited for two new faculty positions. One position is at the Assistant Professor level in Clinical Audiology. Duties will include teaching courses in Clinical Audiology, supervision, and working closely with a Rehabilitation Audiologist already on faculty. The second position is at the Associate Professor level. Ideally the applicant for this position should be qualified in both Speech Pathology and Audiology. Duties will include thesis supervision and teaching courses in both professional areas but with an emphasis in Speech Pathology. These two positions both require the Ph. D. 12 month, multi-year contracts. Apply to Dr. Michael Webster, Director, School of Human Communication Disorders, Dalhousie University, Ground Floor, Fenwick Tower, Halifax, Nova Scotia B3H 1R2.

#### INDUSTRIAL DESIGN

**CARLETON UNIVERSITY School of Design (Industrial):** Applications are invited for a position at the Associate Professor level. Applicants should have a B.I.D. and M.I.D. or equivalent as well as experience in the profession and in education. Specialization in professional practice and methodology, human factors, form and colour fundamentals, or product-manufacturing would be preferred. Responsibilities include teaching undergraduate courses in industrial design subjects and conducting industrial design project work. Salary is dependent upon qualifications. Applications with curriculum vitae and the names of three referees should be forwarded to Professor W. Gilles, Director, School of Industrial Design, Carleton University, Ottawa, Ontario K1S 5B6. Appointment to commence in July 1977.

#### JOURNALISM

**CARLETON UNIVERSITY Journalism:** Applications are being accepted for Assistant Professor. Duties will include teaching introductory courses in reporting and may include assistant in the production and editing of a bi-weekly newspaper. Experience in several media an asset. Enquiries should be addressed to G. S. Adam, Director, School of Journalism, Carleton University, Ottawa, Ontario, K1S 5B6 Effective date of appointment July 1, 1977.

#### KINESIOLOGY

**UNIVERSITY OF WATERLOO Kinesiology:** Position of Physiologist. Ph. D. in physiology, exercise physiology, or a related discipline. Interest or background in cardiovascular-respiratory rehabilitation highly desirable. Teach growth and development from a biological perspective at the undergraduate level and research and teaching at the graduate level in cardiovascular-respiratory physiology. Rank and salary commensurate with experience in teaching and research. Availability of position dependent on budget. Contact: Dr. R. G. Marteniuk, Department of Kinesiology, University of Waterloo, Waterloo, Ontario. Effective date of appointment July 1, 1977. Closing date for receipt of applications April 30, 1977.



The Association for Canadian Studies  
L'Association des Etudes Canadiennes

#### Announces

### The Second Charlottetown Conference

This conference will deal with all aspects of the Symons' Report, To Know Ourselves

University of Prince Edward Island  
Charlottetown, PEI, May 10-13

for information and registration forms write to:  
S.E. McMullin, Canadian Studies  
The University of Waterloo  
Waterloo, Ontario, N2L 3G1

### Royal Military College of Canada Kingston, Ontario

Nous offrons des postes pour enseigner en français.

#### HUMANITES

**Histoire:** *histoire canadienne et histoire européenne moderne*  
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#### SCIENCES

**Mathématiques:** *Statistiques, recherche opérationnelle, mathématiques appliquées et physique théorique*  
**Chimie:** *Thermodynamique et chimie inorganique*  
**Physique:** *Deux postes offerts*

#### GÉNIE

**Chimique et Nucléaire:** *un poste offert*

**Civil:** *Mécanique des sols, hydrologie, béton armé, matériaux de construction.*

**Electrique:** *informatique, machines électrique*  
**Mécanique:** *Thermodynamique, dynamique des fluides, résistance des matériaux et métallurgie.*

**Gestion:** *gestion de la fabrication, recherche opérationnelle, contrôle de la qualité.*

Le doctorat ou l'équivalence démontrée par des travaux reconnus est préféré. La connaissance des deux langues officielles est requise.

S'adresser à:  
Dr. P. Bussièrès  
Assistant au principal  
Royal Military College  
Kingston, Ontario  
K7L 2W3



**WATERLOO UNIVERSITY Kinesiology:** Expertise in biomechanics and biophysical aspects of human movement. While the Department of Kinesiology is primarily interested in appointing an individual in the above areas of expertise, candidates with experience in one or more of the following areas would also be seriously considered: Biomedical Engineering (Rehabilitative Engineering) Physical Therapy; Sports Medicine; Motor Control. Ph. D. degree required. Duties: Undergraduate and graduate teaching and research supervision. The Department has now an M. Sc. program in biomechanics-exercise physiology and now is currently proposing a Ph. D. program in biomechanics expected to begin in 1978. Salary and rank commensurate with teaching and research experience. Contact: Dr. R. G. Marteniuk, Department of Kinesiology, University of Waterloo, Waterloo, Ontario. Closing date March 31, 1977. Effective date of appointment July 1, 1977.

#### **LIBRARY**

**UNIVERSITY OF MANITOBA Systems Coordinator (Library):** The incumbent evaluates library operations defines requirements and develops specifications for cost-effective manual and automated systems; coordinates the implementation and operation of library automated systems. Qualifications: Degree from the accredited library school plus training in library applications of computer science; several years relevant experience in academic libraries; knowledge of library network development; technical knowledge; good human relations and problem solving skills. Candidates without a library degree but with extensive knowledge of, and experience in academic library automated systems will be considered. Salary, \$18,000 plus. The University of Manitoba Library system, comprising a main library (Elizabeth Defoe Library) and twelve regional libraries and reading rooms with a staff of 234 and collections of over one million volumes, serves a student population of approximately 20,000. Computer facilities include an IBM 370 / 168 running OS-VS2. Applications with curriculum vitae should be sent to: Paul Wiens, Assistant Director for Administration (Libraries), Elizabeth Defoe Library, University of Manitoba, Winnipeg, Manitoba, R3T 2N2.

**UNIVERSITY OF SASKATCHEWAN (Library) Head, Cataloging Department:** The University of Saskatchewan Library invites applications for the position of Head of the Cataloging Department. The individual holding this position will be responsible to the Co-ordinator of Technical Services for planning and management of the cataloguing department which processes 30,000 titles per year with a staff of 18 FTE, 9 of whom are librarians. The department is a centralized and highly automated operation serving a main library and ten branches. Qualifications: The position requires a dynamic, progressive person who is capable of responding to changing methods and needs and has a commitment to effective processing and service. Candidates must have a degree from an accredited library school and at least 5 years experience in cataloguing with LC classification, preferably in a large academic or research library. Candidates should have demonstrated organizational and leadership ability in a catalogue department and preferably at least 2 years' successful administrative experience. Working knowledge of automated cataloguing systems is desirable. Current salary range: \$17,308 — \$22,082 (an increase is expected in July, 1977) depending upon qualifications and experience. Rank — Librarian III. Position available June 1, 1977. Applicants are requested to send curriculum vitae and to arrange for a minimum of three letters of reference (sent directly by the referee) to reach the undersigned by April 30, 1977: J. D. Tesdey, Assistant to the University Librarian, The Library, University of Saskatchewan, Saskatoon, Saskatchewan S7N 0W0.

#### **LITERATURE**

**ST. ANDREW'S COLLEGE Language and**

**Literature:** Appointment pending to the Chair of Old Testament Language and Literature, St. Andrew's College, Saskatoon, Saskatchewan. Please address enquiries to the Dean. Closing date when position filled.

**TRENT UNIVERSITY Department of English Literature:** Applications are invited for an anticipated one-year sessional appointment at the rank of Lecturer or Assistant Professor, to begin July 1, 1977, in the fields of 19th and 20th centuries American and early 20th century English literature. Some teaching off the main university campus may be required. Ph. D. or equivalent and teaching experience in the above-named fields required. Salary will be commensurate with qualifications. Applications accompanied by full curriculum vitae showing qualifications and previous experience should be sent to: Professor J.M. Treadwell, Chairman, Department of English, Trent University, Peterborough, Ontario. K9J 7B8 before March 31, 1977.

**UNIVERSITY OF WATERLOO Literature:** Committee for a Doctoral Programme in Comparative Literature invites applications for an appointment in Comparative Literature. Ph. D. required, preferably with teaching experience. The successful candidate will be expected to take part in the detailed organization of the programme, which will come into operation in the fall of 1978, and in the teaching of it. Duties will begin in the fall of 1977. Rank and salary will be subject to negotiation. Applications, which should include the names of three referees, must be received by May 31, 1977. They should be sent to: G. R. Hibbard, Department of English, University of Waterloo, Waterloo, Ontario N2L 3G1.

**UNIVERSITY OF WATERLOO Literature:** Applications are invited for an appointment in Comparative Literature. Ph. D. required, preferably with teaching experience. The successful candidate will be expected to take part in the detailed organization of the programme, which will come into operation in the fall of 1978, and in the teaching of, it. Duties will begin in the fall of 1977. Rank and salary will be subject to negotiation. Applications, which should include the names of three referees, must be received by May 31, 1977. They should be sent to: G.R. Hibbard, Department of English, University of Waterloo, Waterloo, Ontario N2L 3G1.

#### **MANAGEMENT STUDIES**

**UNIVERSITY OF TORONTO Management Studies:** Applications are invited for an accounting position in the Faculty of Management Studies, University of Toronto for September 1977. Required qualifications include completion or substantial completion of an appropriate Ph. D. program with professional accounting qualifications and experience and / or an interest in the financial accounting and public reporting field highly desirable. Duties will primarily involve teaching at the M.B.A. level. Applications should be submitted to: Dean B. E. Clarkson, Faculty of Management Studies, University of Toronto, 246 Bloor Street West, Toronto, Ontario M5S 1V4.

**UNIVERSITY OF WATERLOO Department of Management Sciences:** Applications are invited for the position of Visiting Associate of Full Professor (1977-1978) in finance and / or econometrics. Research interests and experience may be relevant to the public or private sector. The Department of Management Sciences is in the Faculty of Engineering. Our faculty interests span several fields. Teaching is at the undergraduate and graduate levels. Faculty supervise students at the master and Ph. D. levels. Persons with practical and academic experience will be preferred. Applications should be sent to Professor S. D. Saleh, Chairman, Department of Management Sciences, University of Waterloo, Waterloo, Ontario Closing date for receipt of applications is when the position is filled.

#### **MATHEMATICS**

**UNIVERSITY OF ALBERTA Department of Mathematics:** One position available at assistant professor level for July 1, 1977.

Must have a Ph. D. in mathematics or statistics and a demonstrated capacity for teaching and research. A strong background in applied statistics will also be considered an asset. Send curriculum vitae to: Professor M. Klamkin, Chairman, Department of Mathematics, University of Alberta, Edmonton, Alberta.

**UNIVERSITY OF MANITOBA Department of Actuatial and Business Mathematics:** Appointment in Operational Research rank open. Ph. D. or near required, teaching experience desirable. Duties will involve research and teaching in undergraduate and graduate programs. Salary depending on qualifications and experience. H. J. Boom, Department of Actuatial and Business Mathematics, University of Manitoba, Winnipeg, Manitoba R3T 2N2.

**UNIVERSITY OF PRINCE EDWARD ISLAND Department of Mathematics:** Applications are invited for two (2) term appointments at the Instructor or assistant Professor level, effective July 1, 1977. Ph. D. or equivalent required. For one of the appointments a background in Statistics and Computer Science is preferred. Duties will include teaching undergraduate courses in Mathematics and / or Computer Science. Salary commensurate with qualifications and experience. Applications should be sent to Professor G. W. Pinear, Chairman, Department of Mathematics, University of P.E.I., Charlottetown, P.E.I. C1A 4P3 Include curriculum vitae and arrange for three letters of recommendation to be sent directly from referees. Appointments are contingent on final budget approval.

**St. FRANCIS XAVIER UNIVERSITY Department of Mathematics:** Applications are invited for a potential position at the level of Assistant Professor. The appointment is contingent on budgetary approval. Duties consist of teaching undergraduate courses in Mathematics. Candidates must have a PhD and emphasis will be placed on proven teaching ability. Enquiries should be made to: Dr. Charles D. Gallant, Chairman, Mathematics Department, St. Francis Xavier University, Antigonish, Nova Scotia. B2G 1C0.

**UNIVERSITY OF VICTORIA Department of Mathematics:** Temporary position in statistics. Applications are invited for an anticipated visiting position for 1977-78 at the Assistant or Associate Professor level to teach undergraduate courses in university community. Appointment will be contingent on final budget approval. Applicants should send full curriculum vitae and arrange for letters from three references to be sent to: W.I. Gordon Head, Department of Mathematics, University of Victoria, Victoria, B.C. V8W 2Y2.

**UNIVERSITY OF VICTORIA Department of Mathematics:** Temporary position in statistics applications are invited for an anticipated visiting position for 1977-78 at the assistant of associate professor level to teach undergraduate courses in statistics and to assist with the consulting that arises within the university community. Appointment will be contingent on final budget approval. Applicants should send full curriculum vitae and arrange for letters from 3 references to be sent to: W. I. Gordon, Head, Department of Mathematics, University of Victoria, Victoria, B.C. V8W 2Y2.

#### **MEDICINE**

**UNIVERSITY OF CALGARY Faculty of Medicine:** Division of Obstetrics and Gynaecology. Applications are invited for an appointment as either Assistant or Associate Professor. The successful applicant will be expected to have expertise in clinical teaching and practice. An interest in research is required. Send up-to-date curriculum vitae to Dr. Melville Kerr, Professor and Head, Division of Obstetrics and Gynaecology, Dean's Office, Faculty of Medicine, The University of Calgary, Calgary, Alberta T2N 1N4.

**UNIVERSITY OF WESTERN ONTARIO Family Medicine:** Applications are invited for a Research Scientist to conduct research in behavioural and social aspects of family medicine. Applicants should have qualifications and experience in one of the behavioural sciences or in epidemiology. The successful candidate will act as a resource for Faculty and graduate students



## **York University, Toronto Department Of Psychology**

The Psychology Department, Faculty of Arts at York University is considering making two appointments within the following areas commencing July 1, 1977:

**Social Psychology  
Developmental  
Child - Clinical (Clinical-Developmental)  
Clinical**

The Department is also considering a one year Visiting Appointment in Statistics.

Enquiries, Nominations, and Applications should be sent to:

**Professor N. S. Endler  
Chairman, Department of Psychology  
York University  
4700 Keele Street  
Toronto, Ontario  
M3J 1P3**



and will conduct research in their own area of expertise. University rank will be commensurate with qualifications of successful applicant. Starting date is between July and September 1977. Applications with curriculum vitae and the names of two referees should be sent to Dr. I. R. McWhinney, Professor and Chairman, Department of Family Medicine, Kresge Building, The University of Western Ontario, London, Ontario N6A 5C1.

#### MUSIC

**CARLETON UNIVERSITY** Department of Music: Assistant Professor, one-year replacement. Qualifications: Ph. D. or equivalent, with specialization in Canadian Music to teach courses at the undergraduate and possibly graduate level. An interest in Baroque and Classical music would also be an asset. The salary will depend upon qualifications and experience. The position will be effective July 1, 1977. Applications should be addressed to Dr. Alan M. Gillmor, Chairman, Department of Music, Carleton University, Ottawa, Ontario. K1S 5B6.

**CARLETON UNIVERSITY** Department of Music: Assistant or Associate Professor of Musicology. Rank will depend on qualifications and experience. The successful candidate will be required to teach undergraduate courses in Medieval and Renaissance Music, paleography, analysis and one survey course for non-music majors and honours students. Salary will depend upon qualifications and experience. The position will be effective July 1, 1977. Applications should be addressed to Dr. Alan M. Gillmor, Chairman, Department of Music, Carleton University, Ottawa, Ontario K1S 5B6.

**CARLETON UNIVERSITY** Department of Music: Assistant professor, one-year term appointment. Qualifications: Ph. D. or equivalent with specialization on Composition / Theory to teach a variety of undergraduate courses, such as Materials & Techniques, Analysis, Composition, and Instrumentation. Salary will depend upon qualifications and experience. The position will be effective July 1, 1977. Applications should be addressed to: Dr. Alan M. Gillmor, Chairman, Department of Music, Carleton University, Ottawa, Ontario K1S 5B6.

**McMASTER UNIVERSITY** Music Department: Applications are invited for two positions in the Department of Music. 1) Chairman of the Department, probably at the rank of Associate Professor, expert in the field of either a) Renaissance Music or b) 20th Century music. 2) Assistant Professor, expert in the field of either a) Renaissance Music b) 20th century music. The successful candidate may also be expected to teach traditional harmony and counterpoint. Ph. D. or equivalent qualifications from candidates who have gained a solid reputation in their fields, perhaps through published books and articles. Salary commensurate with experience. Present salary floors for 1976-77 are: Associate Professor \$20,000; Assistant Professor \$15,000. The Music Department at McMaster University is a growing one. There are 110 full-time students presently enrolled in its undergraduate programmes. A graduate programme will commence in 1978. Applications must be addressed to: The Chairman, Department of Music, McMaster University, Hamilton, Ontario L8S 4M2 Please send curriculum vitae and the names of three referees.

**YORK UNIVERSITY** Department of Music The Department of Music invites applications for one or more teaching positions (depending on budgetary approval) to commence July 1, 1977 at the rank of Assistant or Associate Professor. Candidates preferred are those with a doctoral degree, teaching experience and some professional maturity. Areas of teaching competence should include at least one of the following: 1) Music theory, the emphasis being on Western historical traditions, and additional competence in one area of performance. 2) Ethnomusicology, with some teaching and administrative responsibilities in a new master's program entitled "Musicology of

Contemporary Cultures" and emphasizing Canadian and other New World studies. Salary to be negotiated, commensurate with rank and experience. Letters of application, together with full supporting materials, to be addressed to: Dr. Alan Lessem, Chairman, Music Department, Room 336 Stong College, York University, 4700 Keele Street, Downsview, Ontario K3J 1P3.

#### NURSING

**LAURENTIAN UNIVERSITY** — School of Nursing: Applications are invited for teaching positions within the third year team of a baccalaureate programme. A master's degree and clinical experience in Psychiatric / Mental Health Nursing or Community Health Nursing are required. Preference will be given to bilingual (French-English) candidates. The focus of the year is the nursing process in life threatening, acute and long-term illness. Rank and salary commensurate with qualifications. Please apply in writing to Dorothy Pringle, Director, School of Nursing, Laurentian University, Sudbury, Ontario P3E 2C6.

**MEMORIAL UNIVERSITY OF NEWFOUNDLAND** School of Nursing: Growing baccalaureate program has faculty position available September 1, 1977 or January 1, 1978. Senior appointments in Maternal Child Nursing and Nursing of Children. Also appointments in Community Health and Mental Health Nursing. Applicants should have doctoral or master's degree. Send resume to: Miss Margaret D. McLean, Director, School of Nursing, Memorial University of Newfoundland, St. John's, Newfoundland, A1C 5S7 Canada.

**QUEEN'S UNIVERSITY** School of Nursing: Applications are invited for the position of Assistant or Associate Professor of Community Health Nursing in a basic university program enrolling approximately 200 students. A master's degree and expertise in practice are required. Preference given to candidates with graduate preparation and / or experience in Maternal Child Nursing. Teaching experience in a university program is desirable. Candidates must be eligible for registration in Ontario. Salary commensurate with qualifications. Apply in writing giving curriculum vitae — Apply to Dr. E. Jean M. Hill, Dean and Professor, School of Nursing, Queen's University, Summerhill, Kingston, Ontario K7L 3N6.

**UNIVERSITY OF SASKATCHEWAN** College of Nursing: Applications are invited for term and regular appointments in Maternal-Child, Primary Care, Community and Mental Health Nursing. To teach in four-year basic and three-year post-diploma programs and implement revised curriculum. Master's or higher degree and experience in clinical field for appointment at professorial ranks: Baccalaureate degree and experience for appointment as lecturer. Starting date: Summer 1977. Contact: Dean, College of Nursing, University of Saskatchewan, Saskatoon, Saskatchewan, Canada. S7N 0W0.

**UNIVERSITY OF WINDSOR** School of Nursing: Is seeking faculty with expertise in nursing research, community health nursing, psychiatric nursing and maternal-child nursing who are interested in the challenge of implementing new integrated curricula in the generic and post-basic baccalaureate programmes. Appointments effective July 1, 1977. Qualifications: Master's Degree in Nursing, Clinical Work Experience, Teaching Experience (desirable). Rank and salary commensurate with qualifications. For further information contact: Mr. A. Temple, Director, School of Nursing, University of Windsor, Windsor, Ontario N9B 3P4.

#### NUTRITION

**UNIVERSITY OF GUELPH** Department of Nutrition: The Department of Nutrition, University of Guelph, has an opening for an Assistant Professor. Applicants should be prepared to undertake teaching and research on metabolic aspects of ruminant nutrition. Strong training in experimental nutrition, biochemistry and / or microbiology is required. Address inquiries to Dr. H.H. Draper, Chairman, Depart-

ment of Nutrition, University of Guelph, Guelph, Ontario, Canada N1G 2W1.

#### OTOLARYNGOLOGY

**KINGSTON GENERAL HOSPITAL** Otolaryngology Department: Otolaryngologist with training and interest in teaching and research required for expanding program. Fully approved residency program in existence together with active clinical research group. Rank and salary negotiable. Apply Dr. D.M.L. Williams, Head, Department of Otolaryngology, Queen's University.

#### PERSONNEL AND

#### INDUSTRIAL RELATIONS

**McMASTER UNIVERSITY** Personnel and Industrial Relations: Faculty position at the rank of Full, Associate or Assistant Professor in the Personnel and Industrial Relations Area commencing July 1, 1977. Successful candidate will be expected to make a strong contribution to research in Industrial Relations and to teach graduate and undergraduate students in such subjects as organizational behaviour, personnel management and labour relations. Send curriculum vitae to: Dr. Roy J. Adams, Chairman, Personnel and Industrial Relations Area, Faculty of Business, McMaster University, Hamilton, Ontario L8S 4M4

#### PHYSICAL EDUCATION

**UNIVERSITY OF ALBERTA** Department of Physical Education: Position of Assistant or Associate Professor. Qualifications are Ph.D. with emphasis in Sport Administration and / or Sport History. Experience in research and in graduate student advisement essential. A background in teaching methodologies would be a distinct asset. Responsibilities primarily in the teaching of undergraduate and graduate courses in the areas noted above. Research and supervision of graduate students in one of these areas will also be required. The successful candidate may also be expected to teach general courses in the undergraduate physical education program. Salary commensurate with qualifications. Application deadline: April 15, 1977. Candidates are asked to submit letter of application, curriculum vitae, educational transcripts, and list of referees to: Dr. R.G. Glassford, Professor and Chairman, Department of Physical Education, University of Alberta, T6G 2H9. This position is open to man and women. The University of Alberta has approximately 20,000 full-time students of which 450 are undergraduates and 68 graduate students in the Department of Physical Education. The Department has 27 full-time as well as part-time staff members. The four year undergraduate degree offers routes or areas of concentration in outdoor education, dance, adapted physical education, sport administration, coaching and athletic training-conditioning. At the graduate level the Department has programs leading to the M.A. (both thesis and non-thesis), M.Sc., and Ph.D. with areas of specialization in Socio-Cultural, Human Motor Behaviour, Administration, Kinesiology, and Physiology of Exercise.

**UNIVERSITY OF ALBERTA** Faculty of Physical Education and Recreation: Position of Assistant or Associate Professor. Qualifications Ph.D. or near Ph.D. with emphasis in the area of Adapted Physical Education and Growth and development. Experience in research is essential. A background in teaching methodologies and / or the ability to coach a sport at the university level would be a definite asset. Responsibilities: primarily in the teaching of undergraduate and graduate courses in the areas noted above. Research responsibilities and program operation commitments in a long-term research project with moderately mentally retarded children that is currently in operation. The successful candidate will be expected to develop competencies to advise graduate students, and / or to teach some general courses and / or work with athletic teams. Salary to commensurate with qualification. Application deadline: April 15, 1977. Candidates are asked to submit letter of application, curriculum vitae, educational transcripts, and list of referees to: Dr. R.G. Glassford, Professor and Chairman,

Department of Physical Education, The University of Alberta, Edmonton, Alberta, T6G 2H9 This position is open to man and women. The University of Alberta has approximately 20,000 full-time students of which 450 are undergraduates and 68 graduate students in the Department of Physical Education. The Department has 27 full-time as well as part-time staff members. The four year undergraduate degree offers routes or areas of concentration in outdoor education, dance, adapted physical education, sport administration, coaching and athletic training-conditioning. At the graduate level the Department has programs leading to the M.A. (both thesis and non-thesis), M.Sc., and Ph.D. with areas of specialization in Socio-Cultural, Human Motor Behaviour, Administration, Kinesiology, and Physiology of Exercise.

**UNIVERSITY OF BRITISH COLUMBIA** School of Physical Education and Recreation: Three positions are available, commencing July 1, 1977, with the possibility of one or two more dependent on budget. Persons with competency in one or more of the following areas are invited to apply by April 15th, 1977. Athletics: Coaching at Varsity level plus Instruction in the Undergraduate and / or Graduate program. Men's Ice Hockey; Women's Basketball; Men's Volleyball; Women's Gymnastics; Physical Education: Instruction in the Undergraduate and / or Graduate program in: Anatomy and Physiology; Biomechanics; Women's Gymnastics; Men's Volleyball; Dance. Rank and salary dependent upon qualifications and experience. Masters degree required. Doctoral degree required for appointment at Assistant Professor level for certain positions. Applications and curricula vitae along with the names of three referees should be forwarded to: Professor Robert F. Osborne, Director School of Physical Education and Recreation, The University of British Columbia, 2075 Wesbrook Place, Vancouver, B.C. V6T 1W5.

#### PHYSICS

**CARLETON UNIVERSITY** Department of Physics: Applications are invited for a term appointment at the Instructor level in Physics. Minimum salary depending on qualifications and experience. Candidates with a B.Sc. (Honours) or an M.Sc. in Experimental Physics with two or more years relevant experience will be preferred. Responsibilities will include supervision and demonstration of undergraduate laboratory and lecturing at introductory level. Replies, with full particulars and references, should be sent to the Chairman, Department of Physics, Carleton University, Ottawa, Ontario K1S 5B6.

**UNIVERSITY OF WATERLOO** Physics Department: Applications are being accepted for Postdoctoral Fellow (2 to 4 positions). Qualifications are Ph.D. Nature of Duties and research include: Atomic & Molecular Physics, Biophysics, Brillouin Spectroscopy, Crystallography, Electron Microscopy, Electron Tunneling, Elieismetry, Experimental Superconductivity, Diffraction Physics, Farinfrared Spectroscopy, Infrared & Raman Spectroscopy, De Hass-van Alphen Effect, Laser Physics, Lattice Dynamics, Nuclear Magnetic Resonance, Semiconductors and Amorphous Semiconductors, Theoretical studies of Magnetic Impurities in Superconductors and other related fields. Salary offered \$11,220.00. Those interested should send applications to Dr. J.W. Leech, Chairman, Department of Physics, University of Waterloo, Waterloo, Ontario N2L 3G1. Effective date of appointment is September 1, 1977 (or by arrangement). Closing date for receipt of applications is open.

#### PLANT SCIENCES

**UNIVERSITY OF WESTERN ONTARIO** Department of Plant Sciences (Genetics): Applications are invited for a lecturer with a Ph.D. in genetics to plan, organize and run a genetics laboratory for science students and to lecture in a separate undergraduate genetics course for general students. Experience is desirable. The ap-



pointment is for nine months and is subject to the availability of funds. Applications including a curriculum vitae and two letters of reference are to be sent by January 31, 1977 to the Chairman, Department of Plant Sciences, The University of Western Ontario, London, Ontario, Canada. N6A 5B7

**UNIVERSITY OF WESTERN ONTARIO Department of Plant Sciences (Cell Biology):** Applications are invited for a Visiting Assistant Professor with a Ph.D. in cell biology or related areas to plan, organize and run laboratories in a large undergraduate core course in Cell Biology and to participate in an intermediate level plant cell biology course. Experience is required. The appointment if for one year and is subject to the availability of funds. Applications including a curriculum vitae and two letters of reference are to be sent by January 31, 1977 to the Chairman, Department of Plant Sciences, the University of Western Ontario, London, Ontario, Canada N6A 5B7

**UNIVERSITY OF WESTERN ONTARIO Plant Sciences (Ecology):** Applications are invited for a Visiting Assistant Professor with a Ph.D. in ecology to participate in lectures and laboratories in a large team-taught undergraduate core course on the Biology of Populations as well as in an advanced level plant ecology course. Experience is required. The appointment is for one year and is subject to the availability of funds. Applications including a curriculum vitae and two letters of reference are to be sent to the Chairman, Department of Plant Sciences, University of Western Ontario, London, Ontario N6A 5B7.

#### POLITICAL SCIENCE

**MEDICINE HAT COLLEGE Political Science:** Medicine Hat College, Alberta, requires an instructor in political science for a one-year appointment only, commencing July 1, 1977. Studies in European or American history would be an asset. Minimum qualification is a Master's Degree. Salary range: \$14,000 - \$17,500, dependent upon qualifications and experience. Please send application and resumé to Dr. L.J. Roy Wilson, Chairman, Department of Arts, Medicine Hat College, Medicine Hat, Alberta, T1A 3Y6

**QUEEN'S UNIVERSITY Political Science:** Lecturer or assistant Professor, sessional appointment (renewable) Ph.D. or near completion required. Undergraduate teaching in International Relation, preference for I.R. Theory, Foreign-Policy Analysis. Salary negotiable. Contact Dr.

J.A.W. Gunn, Head, Political Studies, Queen's University, Kingston, Ontario, K7L 3N6 September 1, 1977, effective date of appointment. Closing date when filled.

**ST FRANCIS XAVIER UNIVERSITY Political Science** Provincial Government, Urban Politics, Methodology. For the 1977-78 academic year St.F.X. University seeks a political scientist qualified in teaching areas: provincial government, urban politics, methodology. Teaching, research or practical experience in Canadian politics is an asset. The applicant should possess a Ph.D. degree. Appointment will be at the assistant or associate level, and salary will be based on rank and experience. The appointment is effective September 1, 1977, and competition closes when the position is filled. Address all correspondence to W.J. Kontak, Chairman, Department of Political Science, St. Francis Xavier University, Antigonish, Nova Scotia, B2G 1C0.

**UNIVERSITY OF WATERLOO Political Science:** Title of position dependent on qualifications. Qualifications: competence in introductory politics, Quebec politics, and one of political socialization, parties, interest groups. Duties include teaching undergraduate courses, research, departmental administration. Salary dependent on qualifications. Contact: J.E. Kersell, Department of Political Science, University of Waterloo, Waterloo, Ontario. N2L 3G1 Effective date of appointment July 1, 1977. Closing date when position filled.

**UNIVERSITY OF WATERLOO Political Science:** The title of position dependent on qualifications. Competence in municipal government and politics, public administration. Duties include teaching undergraduate courses, research, departmental administration. Salary dependent on qualifications. Contact: J.E. Kersell, Department of Political Science, University of Waterloo, Waterloo, Ontario N2L 3G1 Effective date of appointment July 1, 1977. Closing date when position filled.

**UNIVERSITY OF WINDSOR Department of Political Science:** Subject to budget approval, a number of one-year appointments may be available in the Department of Political Science at the University of Windsor. Appointments would be at the lecturer or assistant professor rank in the following areas of specialization: 1) Normative political theory 2) Canadian politics and government 3) public administration 4) political behaviour 5) comparative government. Applications and curriculum

vitae should be sent to: R.H. Wagenberg, Head, Department of Political Science, University of Windsor, Windsor, Ontario N9B 3P4

**TRENT UNIVERSITY Department of Political Studies** A vacancy for a sessional appointment will be effective July 1, 1977, at the lecturer or assistant professor level. Specialization in international relations and participation in the introductory course in politics are required. Ph.D. preferred. Applications with curriculum vitae, details of other teaching and research interests and names of two referees should be sent as soon as possible to Professor Margaret Doxey, Chairman, Department of Political Studies, Trent University, Peterborough, Ontario, K9J 7B8.

#### POULTRY SCIENCE

**UNIVERSITY BRITISH COLUMBIA, Poultry Science 1.** Professor and Chairman. 2. Ph.D. (Poultry/Animal Science) 3. Demonstrated teaching, research and administrative ability. Knowledge of the Canadian agricultural scene is highly desirable. 4. Salary commensurate with qualifications and experience. 5. Send detailed curriculum vitae and the names and addresses of three references to Dr. W. D. Kitts, Dean, Faculty of Agricultural Sciences, University of British Columbia, 2075 Wesbrook Mall, Vancouver, B.C. V6T 1W5. 6. July 1, 1977 or sooner. The University of British Columbia offers equal opportunity of employment to qualified male and female candidates.

#### PSYCHOLOGY

**BISHOP'S UNIVERSITY Department of Psychology:** Applications are invited for a position at the assistant or associate professor level, subject to budgetary approval. The post's duties will include the teaching of undergraduate courses in abnormal psychology, personality, and introductory psychology; possibly a specialty area might be substituted for one of the latter two fields. An appropriate doctorate is required and some teaching experience is desirable; competence in French would be an asset. The position is tenable on July 1, 1977. Applicants should send vitae, the names of three references and, if possible, copies of recent publications, to Dr. L.G. Standing, Chairman, Department of Psychology, Bishop's University, Lennoxville, P.Q. J1M 1Z7.

**BRANDON UNIVERSITY Department of Psychology:** Applications are invited for appointment to the position of Lecturer in the IMPACTE (Indian Metis Project for Careers through Teacher Education) Program to teach Introductory Psychology and Child Psychology to a small class of students in Swan River (May 9 - June 24) and Dauphin (July 4 - August 12). The salary for this short-term appointment is \$4,704.00 plus \$800.00 accommodation allowance. Return economy air fare to home (in Canada) will be paid also. Applications should be sent to Dr. C.W. Anderson, Head, Psychology Department, Brandon University, Brandon, Manitoba R7A 6A9

**CONCORDIA UNIVERSITY (Loyola Campus) Psychology Department:** Applications are invited for several positions: 1) one year visiting appointment to teach social and developmental psychology. 2) Appointments in the areas of clinical psychology experimental and field methods: statistics. All positions are at the rank of assistant professor. Salaries are competitive. Deadline for applications: April 1, 1977, or when positions are filled. Applications should be sent to: Dr. H. Bauer, Personnel Committee, Concordia University, Loyola Campus, 7141 Sherbrooke Street West, Montreal, Quebec H4B 1R6

**DALHOUSIE UNIVERSITY Department of Psychology:** Applications are invited for faculty appointments from candidates with research interests in one of the following: 1. Behavioural Biology: Temporal integration of behaviour, in either invertebrates or vertebrates, from an evolutionary, genetic, developmental, or neurobiological perspective. Preference will be given to those whose background combines Zoology and Experimental

Psychology. 2. Human Communication Systems: The development of verbal and / or non-verbal communication between humans, or of the rules which govern the use of different modes of social communication under different circumstances. Preference will be given to candidates who combine interests in information processing and the sociobiology of communication. 3. Clinical / Medical: The development and application of basic research on human sensory-cognitive-motor systems to clinical problems of organic disease in neurology, ophthalmology and paediatrics. Appropriate interdisciplinary experience and proven technical ability in behavioural tests and electrophysiological recording would be advantageous. The department has active research programmes in the psychophysiology of vision, neural plasticity and animal learning, the ethology of terrestrial and marine animals, the genetics, physiology, neuropharmacology and psychology of memory, and in human cognition and development. Applicants are requested to send their curriculum vitae, reprints of research publications and the names of 3 references to John Fentress, Department of Psychology, Dalhousie University, Halifax, Nova Scotia, Canada. B3H 4J1

**DALHOUSIE UNIVERSITY Psychologist:** Psychologist needed in well-established behaviourally oriented Counselling / Psychological Services Centre. Individually and group work with students on personal, learning and educational / vocational problems. Development of and research into innovative treatment programmes in areas such as anxiety management, study skills, and interpersonal skills. Particular attention given to applicants with Biofeedback Skills and experience. Qualifications: Doctorate in Clinical / Counselling Psychology, with strong empirical orientation. Salary: Commensurate with qualifications. Per 11 months. Apply: John Barrow, Ed.D., Acting Director, Counselling and Psychological Services Centre, Room 422, Student Union Building, Dalhousie University, Halifax, Nova Scotia, Canada B3H 4J2 (Position subject to availability of funds).

**UNIVERSITY OF MANITOBA Department of Educational Psychology:** Position of Assistant Professor with major responsibilities in: a) teaching graduate courses in counsellor education (one third time) b) teaching undergraduate courses in development and learning and / or measurement (two-thirds time) c) advising M.E.D. Students in counsellor education. Salary open, dependent on experience and qualification. Starting date: July 1, 1977. Inquiries and credentials to: Dr. Lauren Sandals, Head, Department of Educational Psychology Faculty of Education, The University of Manitoba, Winnipeg, Manitoba R3T 2N2

**MEMORIAL UNIVERSITY OF NEWFOUNDLAND Department of Psychology:** Position available at the Assistant, Associate or Full Professor level (subject to the availability of funds) in the area of Cognitive Psychology. Ph.D. with teaching and research experience required. Salary in accordance with rank. Apply to Dr. G.R. Skanes, Head, Department of Psychology Memorial University of Newfoundland. A1C 5S7.

**UNIVERSITY OF REGINA Department of Psychology:** Applications are invited for the following position (budget permitting): Assistant or Associate Professor, Social or Clinical Psychology. Ph.D. required for a person who is qualified to teach, guide and conduct research in one or more of the following areas. Social Psychology - social history of social psychology-application to social problems - phenomenological social psychology. Clinical Psychology - clinical and personality theory, women's studies, phenomenological theory in clinical work, transpersonal psychology. Duties include teaching of graduate and undergraduate courses, supervision of M.A. and Ph.D. theses. Applicants should forward their curriculum vitae and names of three referees by April 15, 1977, to Dr. R.R. Robinson, Dean, Faculty of Arts, University of Regina, Regina, Saskatchewan.

## LUTHER COLLEGE

University of Regina, Regina, Saskatchewan, Canada

## ACADEMIC DEAN

Luther College invites nominations and applications for the position of Academic Dean. The Academic Dean is the chief academic officer for the College and is responsible to the President for the supervision, direction and administration of the academic programs including responsibility for student academic counseling and faculty relations. The Dean sees that close liaison is maintained with the University of Regina, its faculties and departments in the development of programming and staffing.

Persons interested in this position should have an earned Doctorate, a strong background in scholarship, undergraduate teaching and administrative leadership and preferably some first-hand experience at both a small liberal Arts College and a larger university. Sensitivity to the nature of a church-related college is essential.

Luther is an undergraduate liberal Arts College (co-educational) located on and federated with the University of Regina. The College has its own regents, president, faculty, staff, plant and budget, although there is a close reciprocal relationship with the University in the sharing of faculty and university facilities.

Salary is dependent on qualifications and experience. Appointment date is July 1, 1977.

Applications should include curriculum vitae and the names and addresses of at least three references and should be sent to President M. A. Anderson, Luther College, University of Regina, Regina, Saskatchewan. S4S 0A2.



**QUEEN'S UNIVERSITY** Department of Psychology: Position in Clinical Psychology at the Assistant Professor level. Initially, this appointment will be for one year's duration. The Department has a well developed programme in Clinical Psychology with a behavioural orientation. The appointed person would be expected to participate in the applied aspects of clinical training. Interest and experience in developmental and childhood psychopathology would be an advantage. Applications should be sent to: Dr. A. McGhie, Chairman, Clinical Training Programme, Department of Psychology, Queen's University, Kingston, Ontario

**UNIVERSITY OF WATERLOO** Psychology: Position in Area of Perception-Cognition. Ph.D. in Psychology. Teaching and supervision at Graduate and Undergraduate levels. Research. Salary offered dependent on qualifications. Contact: R.K. Banks, Department of Psychology, University of Waterloo, Waterloo, Ontario, N2L 3G1. Effective date of appointment July 1, 1977. Closing date for receipt of applications May 1, 1977.

**UNIVERSITY OF WATERLOO** Psychology: 1 year definite-term appointment in Social Psychology. Ph.D. in Psychology. Teaching and supervision at Graduate and Undergraduate levels. Research. Salary offered dependent on qualifications. Contact: R.K. Banks, Department of Psychology, University of Waterloo, Waterloo, Ontario N2L 3G1 July 1, 1977 is effective date of appointment. Closing date for receipt of application, May 1, 1977.

**UNIVERSITY OF WATERLOO** Psychology: 1 Year definite-term appointment in Development Psychology. Ph. D. in Psychology required. Duties include teaching and supervision at graduate and undergraduate levels. Research. Salary dependent on qualifications. Contact: R.K. Banks, Department of Psychology, University of Waterloo, Waterloo, Ontario N2L 3G1. Effective date of appointment July 1, 1977. Closing date of applications May 1, 1977.

**UNIVERSITY OF WATERLOO** Psychology: 1 year definite term-appointment in clinical psychology. Qualifications Ph.D. in Psychology. Duties include teaching and supervision at graduate and undergraduate levels. Research. Salary offered dependent on qualifications. Contact: R.K. Banks, Department of Psychology, University of Waterloo, Waterloo, Ontario N2L 3G1. Effective date of appointment July 1, 1977. Closing date for receipt of applications. May 1, 1977.

#### RECHERCHES

**COLLEGE UNIVERSITAIRE DE SAINT-BONIFACE:** Centre de Recherches: Chercheur en éducation. Qualification académique: Au moins une maîtrise en éducation. Une bonne expérience de recherche en éducation est essentielle ainsi que la connaissance du français. Salaire: \$12,000 à \$20,000 selon les qualifications et l'expérience. Faire parvenir votre curriculum vitae, incluant les noms de trois références, une liste de publications, avant le 1er Avril 1977 à: Robert Léger, directeur, Centre de Recherches, Collège Universitaire de Saint-Boniface, 200, avenue de la Cathédrale, Saint-Boniface (Manitoba) R2H 0H7

#### RELIGIOUS STUDIES

**UNIVERSITY OF CALGARY** Department of Religious Studies: Applications are invited at the Assistant Professor level (subject to funding) for a vacancy in the area of Indian Philosophy and Religion, commencing July 1, 1977. Candidates should have completed a Ph.D. Teaching is concentrated mainly on the undergraduate level. Competence to teach Sanskrit and the Psychology of Religion a definite asset. Salary will depend on qualifications and experience, but the current scale, subject to revision for 1977-78, is \$16,630-\$21,720. Application enclosing curriculum vitae and list of referees should be sent to: Dr. Harold Coward, Head, Religious Studies Department, University of Calgary,

Calgary, Alberta, Canada T2N 1N4.

**CONCORDIA UNIVERSITY** (Sir George Williams Campus) Religion: Leave Replacement in Religion and Society and / or Comparative Ethics. Assistant Professor. Availability and pay subject to university approval. Write: Frederick Bird, Acting Chairman, Department of Religion, Concordia University, (S.G.W.), 1455 de Maisonneuve Blvd., Montreal, Quebec.

**UNIVERSITY OF MANITOBA** Department of Religion: Applications are invited for a position in the field of World Religions — leave replacement for one year — September 1977 to June 1978. Ph.D. Ability to work with graduate students. Interest and competence in native North American religions preferred. Salary open. Dossiers to be sent to: Dr. William Klassen, Head, Department of Religion, University of Manitoba, Winnipeg, Manitoba R3T 2N2. Closing date is open.

#### ROMANCE LANGUAGES

**McMASTER UNIVERSITY** Department of Romance Languages: Applications are invited for a two-year position (1977-78) at the rank of Assistant Professor to teach Spanish at the undergraduate level. Ph.D. required; experience in the theory and practice of foreign language teaching; candidates should be prepared to teach Peninsular Spanish literature. An interest in Golden Age will be an asset. Application, including curriculum vitae and names of three referees should be addressed to: Chairman, Department of Romance Languages, McMaster University, Hamilton, Ontario L8S 4M2

**McMASTER UNIVERSITY** Department of Romance Languages: Applications are invited for a one-year replacement (1977-78) at the rank of Lecturer or Assistant-Professor, to teach Italian at the undergraduate level. Ph.D. preferred; experience in the theory and practice of foreign language teaching. Salary according to experience. Application, including curriculum vitae and names of three referees should be addressed to: Chairman, Department of Romance Languages, McMaster University, Hamilton, Ontario L8S 4M2

**McMASTER UNIVERSITY** Department of Romance Languages: Applications are invited for two replacements at the rank of Assistant-Professor, respectively for one year (1977-78) and two years (1977-79) to teach French at the undergraduate level. Ph.D. required; experience in the theory and practice of foreign language teaching; candidates should be prepared to teach preferably 17th C., 18th C. or French Canadian Literature and civilization; publications preferred. Salary according to experience. Application including curriculum vitae and names of three referees should be addressed to: Chairman, Department of Romance Languages, McMaster University, Hamilton, Ontario L8S 4M2

**WILFRID LAURIER UNIVERSITY** Department of Romance Languages: Position of Associate Professor, Peninsular Spanish Literature. Qualifications are Ph.D. Speak the language like a native. Good teaching record and publications. Salary commensurate with qualifications. Apply to: Dr. A.A. Borrás, Chairman, Department of Romance Languages, Wilfrid Laurier University, Waterloo, Ontario. N2L 3C5 Closing date July, 1977.

*The display advertisement for nominations and applications for the position of President of the University of Prince Edward Island which appeared in the January issue of the CAUT Bulletin stated that the term of office will commence July 1, 1977. In fact, the date of commencement is July 1, 1978.*

*We regret the typographical error which might have caused some inconvenience to those concerned.*

University, Waterloo, Ontario. N2L 3C5 Closing date July, 1977.

#### SOCIAL WORK

**UNIVERSITY OF TORONTO** Social Work: Assistant Professor, doctorate preferred but at least a Master's degree in social work with some teaching and / or experience particularly in the areas of a) research b) social policy development with preferably with experience in evaluative research b) social policy development with particular reference to delivery of personal services. Salary commensurate with rank in accordance with the scales of the University. Address application to the Acting Dean Faculty of Social Work. University of Toronto, 246 Bloor Street, West, Toronto, Ontario M5S 1A1. Effective date July 1st, 1977.

#### SOCIOLOGY

**UNIVERSITY OF WATERLOO** Department of Sociology: The department of sociology anticipates having one or more positions available beginning September 1977. All ranks considered though preference will be given to junior ranks. Demonstrated excellence in research and teaching are more important than areas of specialization. Candidates should have completed all Ph.D. requirements by August 1977. Applicants are invited to send their curriculum vitae and names of three people who can be contacted for letters of reference to: Audrey Wipper, Chairman, Recruitment Committee, Department of Sociology, University of Waterloo, Waterloo, Ontario N2L 3G1. Effective date of appointment September 1977.

**UNIVERSITY OF WATERLOO** Sociologie: Le département de sociologie espère disposer d'un ou de plusieurs postes au début de septembre 1977. Les postulants de tout niveau seront pris en considération mais préférence sera donnée aux postulants juniors. On tient davantage compte d'excellentes qualités dans la recherche et l'enseignement que des domaines de spécialisation. Les candidats doivent avoir satisfait à toutes les exigences requises pour le Ph.D. en août 1977. Les candidats devraient envoyer leur curriculum vitae et les noms de trois personnes auxquelles il peut être fait appel pour des lettres de recommandation à Audrey Wipper, Chairman, Recruitment Committee. University of Waterloo, Waterloo, Ontario N2L 3G1.

**YORK UNIVERSITY** Department of Sociology: This department anticipates making two new appointments of either a continuing or sessional nature for 1977-78. Applications are invited from those with specialization in one or more of the following areas: the sociology of education, urban studies, social psychology (with particular reference to small groups research or symbolic interactionism, ethnomethodology, deviance, historical sociology, the family, women's studies, history of theory, comparative sociology. Write: Christopher Nichols, Chairman, Recruitment, Department of Sociology, York University, 4700 Keele Street, Downsview, Ontario, Canada. K3J 1P3.

#### THÉÂTRE

**DALHOUSIE UNIVERSITY** Department of Theatre: This department is searching for a well qualified teacher of acting, with significant professional experience and recognized achievement as a teacher. He or she would be responsible for developing the acting stream within the honours B.A. theatre programme into one of excellence. The degree programme is a four-year course of study with an academic core, comprising theatre history, dramaturgy, and theatre aesthetics and criticism; a sound scenography stream; and an acting stream. The department functions in excellent facilities, and has a staff of seven professors and seven technicians. There are currently seventy theatre students, with over three hundred enrolled in classes offered by the department. The appointment will take effect from September 1, 1977. Any interested candidates should submit a curriculum vitae, the names of three referees, and an outline of his or her approach to the teaching of acting to: L.H. Lawrence, Chairman, Department of Theatre, Dalhousie University, Halifax,

Nova Scotia, B3H 3J5 Canada.

**YORK UNIVERSITY Theatre:** Applications are invited for the position of Visiting Lecturer, to teach stage lighting and production courses in the academic year 1977/78. M.F.A. and professional experience preferred. Applications, including curriculum vitae and list of referees, should be submitted to William Lord, Chairman, Department of Theatre, York University, Downsview, Ontario M3J 1P3.

#### URBAN AND REGIONAL PLANNING

**YORK UNIVERSITY** Urban and Regional Planning: Applications are being accepted for Assistant Professor in the Department. Duties will include instructing at the graduate level in quantitative methods and transportation and/or economic bases of urban and regional planning. A Ph.D. in planning or a cognate field is required, and preference will be given to applicants with professional experience. Applications should be sent to: The Chairman, Department of Urban and Regional Planning, University of Toronto, by April 4, 77.

#### VISUAL ART

**UNIVERSITY OF VICTORIA** Department of Visual Art required for 1977/78: Visiting Instructor to teach Lithography and/or Etching, and Relief Printing at 2nd and 3rd, and 4th year levels. In addition ability to teach any of the following is desirable: Deadline for receipt of applications 15 April 1977. Application with full curriculum vitae and slides of work should be sent to the Chairman, Department of Visual Arts, University of Victoria, P.O. Box 1700, Victoria, B.C. V8W 2Y2.

#### VOCATIONAL EDUCATION

**UNIVERSITY OF NEW BRUNSWICK** Division of Vocational Education: Business Education Teacher Educator. Applications are being accepted for several positions (pending budget approval) on our Kenya UNB/CIDA Technical Teachers College Project based in Nairobi, Kenya, East Africa. Contracts are for a period of two years duration commencing July 1977. Secondment can be arranged. Masters or Doctorate with a major in Industrial or Technical Education to teach laboratory and professional courses. Salary \$26,000 to \$30,000 PA plus overseas allowance, subsidized housing and other CIDA fringe benefits, Canadian Citizenship required. Letters of application, including a detailed curriculum vitae and the names of two references to be sent to Mr. J.S. Harris, KTTCC Project, Division of Vocational Education, University of New Brunswick, P.O. Box 4400, Fredericton, N.B. E3B 5A3.

#### PERSONAL

The tenth annual conference of the Canadian Council of Teachers of English will be held August 22 to 26, 1977 at the University of Winnipeg. The conference theme is Manitoba Mosaic, and will include informal gatherings of Manitoba writers as well as helpful practical sessions. Among the major speakers are Margaret Laurence, Robin Matthews, Sybil Shack. Entertainment and food appropriate to Manitoba's ethnic mosaic will round out an exciting program. Registration fees (which include the daily featured luncheon) are \$30.00 for members of CCTE, \$40.00 for non-members. Further information may be obtained from the registration chairman, Audrey Young, 36 Wordsworth Way, Winnipeg, Man. R3K 0J9.

**FACULTY EXCHANGE CENTER** Founded and administered by faculty members, helps to arrange exchanges of college and university faculty within North America and overseas where the language of instruction is English. For information write to Faculty Exchange Center, Franklin and Marshall College, P.O. Box 1091, Lancaster, Pa. 17604 U.S.A..

**MONTREAL:** House for Rent Fully furnished and equipped five bedroom house in Montreal West, 20 to 30 minutes from major universities and teaching hospitals. Study, fireplace, large garden. Elementary and high schools, stores, swimming pool, tennis courts, indoor ice rink all within blocks. For rent approximately July 1, 1977 for 12 to 14 months. Write: Dr. G. Weinlander, 57 Wolseley Avenue, North, Montreal West, Quebec H4X 1V6.



## Research lobbying: choosing the next step

John S. Cowan

Lobbying of elected representatives and bureaucrats by the research community is relatively new in Canada but not in other developed countries. During the past two years Canadian efforts have matured considerably, but their effectiveness remains in doubt.

Until the recent stimulus of the federal freeze on the budgets of the granting councils, disparate elements of the research community contented themselves with the submission of occasional learned briefs which outlined in a dignified way the harmful aspects of capricious funding policies. Many felt that representations on these lines were equivalent to consultation, and the realization was still to come that the senior civil servants in MOSST and the granting councils were government's spokesmen to the research community rather than the community's spokesmen to government.

### *Lobbying, consisting of individual constituent contacts with M.P.'s*

The "freeze" of December 1975 matched the community's worst fears, and the voices citing the data showing rapid contraction of research became more strident. Three types of lobbying were undertaken on a noticeable scale: (a) Anecdotal lobbying, consisting of individual constituent contacts with M.P.'s, local and national media coverage of individual or group horror stories, and the appropriate concerned testimony of prominent individual researchers before Parliamentary and Senate Committees and the like. Many influential members of government were approached quietly in an extension of the old approach. (b) Organized lobbying by researchers, involving individual approaches to large numbers of M.P.'s using large numbers of researchers gathered for that purpose. An interesting example was the undertaking in March 1976 by researchers representing the Canadian Assoc. of University Teachers (CAUT) and the Canadian Federation of Biological Societies

(CFBS) on research funds and on federal-provincial cost-sharing. (c) Organized lobbying by the public, a notable example of which was the emergence of Canadians For Health Research, and their lobby, again basically on funding, in the Spring of 1976. The Canadian Society for Clinical Investigation certainly must take considerable credit for providing advice and stimulus to CHR.

Addressed principally to immediate funding, these efforts met with polite scepticism, though the effects may have been largely delayed (see below). In December of 1976 while (a) and (c) above continued apace, the CFBS invited learned societies and organizations representing virtually all of Canadian researchers in health, science, and the humanities to join them in a lobby of M.P.'s of all parties on long-term federal funding and research policy. The researchers, including many from government in-house research, surprised themselves by having substantial common ground. All agreed to continue to act in a concerted way.

It seems certain that the societies representing the research disciplines will continue these efforts. Many M.P.'s from various parties have advised them to do so; they are beginning to collect substantial sums of money from membership to finance such activities. But is this activity merely a placebo? Is lobbying having any effect?

There is no doubt about two effects. The research issue is raised more often in the House, and M.P.'s are substantially better informed. The fear, however, is that it may end there.

It has been alleged that the attempts of early 1976 influenced the allocation of an additional \$2 million dollars for the Medical Research Council, while others insist it was expected all along. The truth probably lies in between: the money may have been allocated in anticipation of a protest but would not have appeared had there been no outcry.

Furthermore, with federal extra-mural grants in all research areas needing \$40 million to meet even 1970 purchasing power, the \$2 million doesn't seem like a huge success.

On the other hand, efforts in December 1976 found

M.P.'s virtually all in agreement on the need for stable projections of 3 to 9 years in spending and priorities, a vast change from March 1976 views. There was no doubt, either, that the need for consultation with researchers rather than administrators or "science civil servants" was more widely recognised, and the research community's scepticism about MOSST was matched by that of even government M.P.'s. The briefings lasted much longer, and many M.P.s were clearly embarrassed that nothing had changed since the Spring. One may ask, though, do the M.P.s matter? The test comes

### *Organized lobbying by researchers, involving individual approaches to large numbers of M.P.'s*

soon. Will bill C-26, reorganizing the granting councils, be a prelude to a proper budget and a long-range policy? Will the research community have real input on the choice of persons to sit on granting councils, the Inter-Council Coordinating Committee and the Federal-Provincial Committee on Research, or will incestuous consultation within the civil service be the order of the day?

Thus Spring of 1977 represents a turning point in research lobbying. Until now the emphasis has clearly been educational lobbying, which is a forceful extension of older methods of representation. If the climate begins to change, this method will be perceived as a good one, and will continue. If no effect is noted, however, the research community will split three ways. One group will be demoralized and give up. Another will still proceed with the current approach. The third will probably shift to outright protest lobbying and political opposition and might become heavily involved in the next federal election campaign.

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